Digital Media Recorder with Microsoft® Program Guide

User's Guide

Model: LRM-519

Before connecting, operating or adjusting this product,
please read this instruction booklet carefully and completely.

Call us toll-free for technical support, or to subscribe to the Microsoft® Program Guide service:

1-800-984-6306

www.microsoftprogramguide.com

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CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK
OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE
PERSONNEL.

This lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the instructions accompanying the product.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

WARNING: Do not install this equipment in a confined space such as a book case or similar unit.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

CAUTION:

This DVD/CD receiver employs a Laser System.

To ensure proper use of this product, please read this User's Guide carefully and retain it for future reference. Should the unit require maintenance, contact an authorized service location (see service procedure).

Performing controls, adjustments, or carrying out procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus should not be exposed to water (dripping or splashing) and no objects filled with liquids, such as vases, should be placed on the apparatus.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

FCC WARNING: This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

FCC COMPLIANCE: The responsible party for this product's compliance is:
LG Electronics U.S.A., Inc. 1000 Sylvan Avenue
Englewood Cliffs, NJ 07632, USA
Phone: 1-847-941-8373.

REGULATORY INFORMATION: FCC Part 15
This product has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the product is operated in a residential installation. This product generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this product does cause harmful interference to radio or television reception, which can be determined by turning the product off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the product and receiver.
- Connect the product into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 68
- This product complies with Part 68 of the FCC rules. On the back of this product is a label that contains, among other information, the FCC registration number and Ringer Equivalent Number (REN) for this product. If requested, this information must be provided to the telephone company.
- The REN is used to determine the quantity of devices that may be connected to the telephone line. Excessive RENs on the telephone line may result in the devices not ringing in response to an incoming call. Typically, the sum of the RENs should not exceed five (5). To be certain of the number of devices that may be connected to the line (as determined by the total RENs) contact the local telephone company.
- If this product causes harm to the telephone network, the telephone company will notify you in advance that temporary discontinuance of service may be required. But if advance notice isn't practical, the telephone company will notify the customer as soon as possible. Also, you will be advised of your right to file a complaint with the FCC if you believe it is necessary.
- The telephone company may make changes to its facilities, equipment, operations or procedures that could affect the operation of the product. If this happens, the telephone company will provide advance notice so you can make the necessary modifications to maintain uninterrupted service.
- Connection to party line service is subject to state tariffs. (Contact the state public utility commission, public service commission, or corporate commission for information.)
- If trouble is experienced with this product, for repair or warranty information, please contact LG Electronics Inc. If the product is causing harm to the telephone network, the telephone company may request that you disconnect the product until the problem is resolved.
- An FCC compliant telephone cord and modular plug is provided with this equipment. This equipment is designed to be connected to the telephone network or premises wiring using a compatible modular jack which is Part 68 compliant. See installation instructions for details.

SERIAL NUMBER: The serial number is located on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No. LRM-519

Serial No. _____

IMPORTANT SAFETY INSTRUCTIONS

CAUTION: PLEASE READ AND OBSERVE ALL WARNINGS AND INSTRUCTIONS IN THIS USER'S GUIDE AND THOSE MARKED ON THE UNIT. RETAIN THIS MANUAL FOR FUTURE REFERENCE.

This set has been designed and manufactured to assure personal safety. Improper use can result in electric shock or fire hazard. The safeguards incorporated in this unit will protect you if you observe the following procedures for installation, use, and servicing.
This unit does not contain any parts that can be repaired by the user.

DO NOT REMOVE THE CABINET COVER, OR YOU MAY BE EXPOSED TO DANGEROUS VOLTAGE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL ONLY.

1. **Read these instructions.** - All these safety and operating instructions should be read before the product is operated.
2. **Keep these instructions.** - The safety, operating and use instructions should be retained for future reference.
3. **Heed all warnings.** - All warnings on the product and in the operating instructions should be adhered to.
4. **Follow all instructions.** - All operating and use instructions should be followed.
5. **Do not use this apparatus near water.** – For example: near a bath tub, wash bowl, kitchen sink, laundry tub, in a wet basement; or near a swimming pool; and like.
6. **Clean only with dry cloth.** – Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners.
7. **Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.** Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the product and to protect it from over-heating. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
8. **Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.**
9. **Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.**
10. **Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.**
11. **Only use attachments/accessories specified by the manufacturer.**

12. **Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.**
13. **Unplug this apparatus during lightning storms or when unused for long periods of time.**
14. **Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**

ON COPYRIGHTS:
It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyrighted material without permission.

This product features the copy protection function developed by Macrovision. Copy protection signals are recorded on some discs. When recording and playing the pictures of these discs on a VCR, picture noise will appear.
This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

LEGAL NOTICE

This product is protected by certain intellectual property rights of Microsoft Corporation. Use or distribution of such technology outside of this product is prohibited without a license from Microsoft Corporation or an authorized Microsoft Corporation subsidiary.

This product is intended to be used with a program guide service provided by Microsoft and that any rights or claims the purchaser may have regarding the use, content or availability of the service will be determined by the terms of service agreement provided by Microsoft that govern such service.

Table of Contents

LG LRM-519 FRONT PANEL AND REAR PANEL 9

PACKAGE CONTENTS 10

Optional accessories 10

SUBSCRIBE TO THE MICROSOFT® PROGRAM GUIDE 11

CONNECT THE RECORDER TO THE TV, AUDIO COMPONENTS, AND INTERNET 12

Connect to the TV source 12
- Standard Cable 12
- Digital Cable 13
- Satellite 14
- Antenna 15

Multiple TV sources 16
- Satellite and Antenna 16
- Satellite and Standard Cable 17

Connect the Recorder to the TV 19
- Use Composite Cables 19
- Use S-Video Cables 19
- Use Component Cables 20
- Using Composite versus 480i/480p 20

The IR control cable and the Serial Data Control Cable 21

Digital or Optical Audio Setup 23
- Digital Audio cable 23
- TOS cable 24

Connect to the Microsoft® Program Guide Service 24
- Connect to a wired network (Ethernet) 24
- Connect to a wireless network (802.11) 25
- Supported USB Wireless Network Adaptors 25
- Connect using dial-up 26

Program the Remote to Control the TV 26
- To program the remote control 27

TV Manufacturing Remote Control Codes 28

Connect the Power to the Recorder and Turn on the TV 30

SET UP THE RECORDER 31

Welcome to Setup 31

Terms of Service and End-User License Agreement 32

1. Set up Connection 32
   - 1a. Use Broadband 32
     - Wireless Configuration 32
     - If You Select "Use USB Wireless Network Adaptor" 32
     - If You Select "Use Wired (Ethernet) Connection" 33
   - 1b. Use Phone Line 33
     - Phone Configuration 33
     - Enter Your Home Phone Number 33
     - Phone Connection 34
     - Choose Dial-up Number 34

2. Clock Setting 34

3. Subscription Status 35

4. Enter your ZIP Code 35

5. Wiring Setup and TV Service Provider 35
   - TV Service Provider 36
   - Choose Number of Digits and How You Change Channels 36

6. Set up the Recorder to Change Channels on the Set-top Box 37
   - The IR Control Cable and the Serial Data Control Cable 37
   - Prepare for Set-top Box Setup 37
   - Video Test 37
   - Select Remote Control Code 37
   - Test Changing Channels 38
   - Speed Test 38
   - Recorder Remote Control Settings 38

7. Watch TV 38

Downloading the Program Guide and Software Updates 39
- The First Time You Setup The Recorder 39
- Future Program Guide Updates 39
- Future Software Updates 39

Parental Controls and Locks 40
Create a Parental Control PIN 40
Set the Parental Control Policy 40
Lock by Rating 40
Lock by Channel 41
Lock DVD 41
Turn on Lock Policy 41
Change PIN 41
Reset 41
Forgot the Parental Control PIN? 41
Changing Settings 41
Recorder 42
Guide Setup 42
DVD Settings 43
Parental Controls 44
Phone and Network Setup 44
Run Setup Again 44
System Information 44
Send to PC 44
Audio Settings 44

WINDOWS® MEDIA CONNECT: ACCESS PICTURES AND MUSIC STORED ON A COMPUTER 45

Before You Use Windows Media Connect 45
Connect to a Computer Running Windows Media Connect 45

GETTING AROUND THE RECORDER MENUS 46

(START) 46
Move Around the Menus 46
Select a Menu Item 46
Enter Text by Using the Remote 47
Viewing Pay-Per-View or Video-On-Demand Programs 47

USING THE RECORDER 48

Watching TV 48
Change Channels on the TV 48
Switch between the Current Channel and the Previous Channel 48
Display Information about the Current TV Show 48
Controlling Live TV 49
Pause Live TV 49
Continue Playback of a Paused TV Show 49
Replay Live TV 49
Rewind Live TV 49
Fast Forward 49
Skip Ahead 49
Return to Live TV 49
Turn the TV Off or On 50
Change the TV Volume 50
Mute the TV 50
Change the TV Input Source 50
The Program Guide 50
Turn off the Guide 51
Navigating within the Program Guide 51
Recorded TV 51
Record the Current Show 51
Record a Show Using the Guide 52
Record Using Search 52
Record a TV Series 53
Manually Record a Show 53
Stop the Current Recording 53
Cancel Future Recordings 53
Recording Conflicts 54
Change Recording Options 54
View Information about a Show That is Recording 54
Copy a Recording to a DVD or a Computer 54
Record-protected program content 54
View a Recorded Show 55
View Scheduled Recordings 55
View Info about a Recorded Show 55
Add Additional Storage 55
Connect a USB drive for storage 56
Remove a USB drive 56

Search 57
Play a DVD/CD 57
Viewing a DVD 57
DVD Controls 58
Create a DVD 58
Copying Copy-protected Shows 58
Copy of Commercial/Retail Copyrighted DVDs 59
Copy a Recording to a DVD 59
Copy a Large Recording to More Than One DVD 59
My Pictures 60
View Pictures with the Recorder 60
My Music 61
Find Music to Play 61
Listen to Music 61
Play Music on a CD or DVD 61
Play Music on a USB Device or Another Computer 62
Shuffle and Repeat Music 62
Add Music to a Slide Show 62
Send to PC 63
If Your Computer is Connected to a Network Domain 63
Before Using Send to PC 63
Your Network User Account and Password 63
Windows XP Home Edition 63
Windows XP Professional 63
The Shared Folder and the Location of the Folder 64
Windows XP Home Edition 64
Windows XP Professional 64
Use Send to PC to Copy a Recording to a Computer 65
Stop the Copy Process 65

APPENDIX A: THE MICROSOFT® PROGRAM GUIDE 66

APPENDIX B: TROUBLESHOOTING 67

SPECIFICATIONS 73

LRM-519 Limited Warranty . . . Rear Cover

POWER Turns on or turns off the Recorder.
When the Recorder is turned off, the Recorder is actually in a standby mode. While in standby, the Recorder will continue copying programs to a DVD (the Create DVD/CD feature) and record any programs you have scheduled.

TV POWER Turn on or turn off the TV. To use the TV POWER button, you must program the remote to control your TV. For more information, see **Program the Remote to Control the TV**.

▶ PLAY Play a paused or stopped DVD, CD, song, a recorded TV show or a paused TV show. To play a stopped DVD, you can also select **Play DVD** on the Start menu.

■ STOP Stop playback of a DVD, a CD track, a song from a USB drive or another computer, and a recorded TV program.

◀◀ REW Rewind through a recorded program, live TV, the current chapter of a DVD, or track of a CD.

⏮ REPLAY Replays the previous 7 seconds of live TV or a recorded show. Move back to the beginning of the current chapter of a DVD or track of a CD; press a second time to go back to the preceding chapter of a DVD or track of a CD.

RECORDED TV Display recorded TV shows.

← BACK Return to the previous menu or screen.

OK Selects the current on-screen button such as **Next**, **OK**, **Cancel**, or an item in a list such as the Program Guide.
When watching live TV, press once to switch from the current channel to the previous channel. Press OK again to switch back.

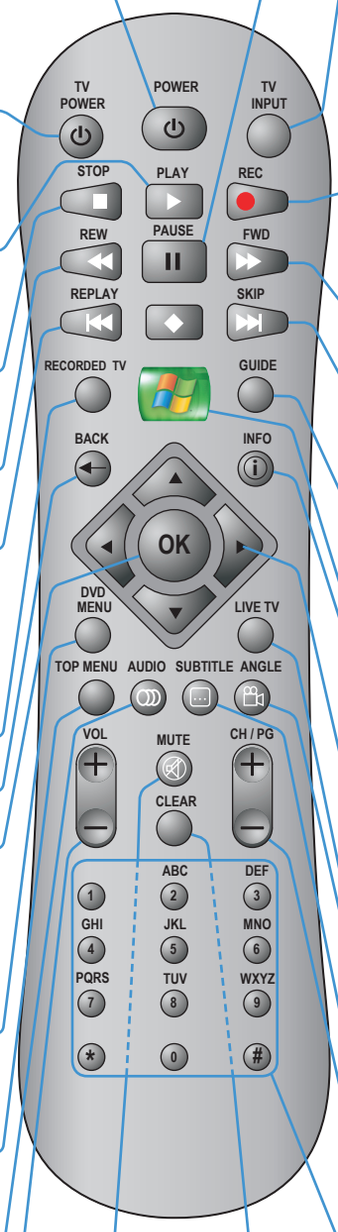
DVD MENU During DVD playback, displays the top-level (main) DVD menu. If you are within a DVD menu, takes you back one level in the menu.

TOP MENU During DVD playback or while navigating DVD menus, takes you back to the top-level (main) menu on the DVD.

AUDIO Change DVD audio options.

VOL Increases (+) or decreases (-) the TV volume. To use the **VOL** button, you must program the remote to control your TV. For more information, see **Program the Remote to Control the TV**.

MUTE Mutes the TV. To use the **MUTE** button, you must program the remote to control your TV. For more information, see **Program the Remote to Control the TV**.



PAUSE Pause a DVD, CD, song, live TV, or recorded TV program.

TV INPUT Change the video inputs on your TV. For example, the Recorder will be connected to one video input (such as VIDEO 1) and a Video Cassette Recorder could be connected to VIDEO 2. To use the TV INPUT button, you must program the remote to control your TV. For more information, see **Program the Remote to Control the TV**.

● REC When watching TV, records the current program. In the Guide or the mini-Guide, schedules the selected show to be recorded.

▶▶ FWD Fast forward through a recorded program, the current chapter of a DVD, or track of a CD.

⏭ SKIP Jump forward 30 seconds of a recorded program or paused live TV.
Advances to the next chapter of a DVD or track of a CD.

GUIDE Press once to display the Mini-Guide. Press again to display the Program Guide. Press a third time to dismiss the Guide.

Start Display the Start menu.

ⓘ INFO Display information info in a window about the live TV show or the recorded program you are watching. Press INFO again to display additional information in full-screen.

Up, down, left, and right arrows Move between on-screen buttons (menu buttons, navigation buttons) and Guide items. Moves between pictures in a slideshow.

LIVE TV Displays live TV.

ANGLE View alternate scene angles. If you enable this feature, this icon appears when an alternate angle is available.

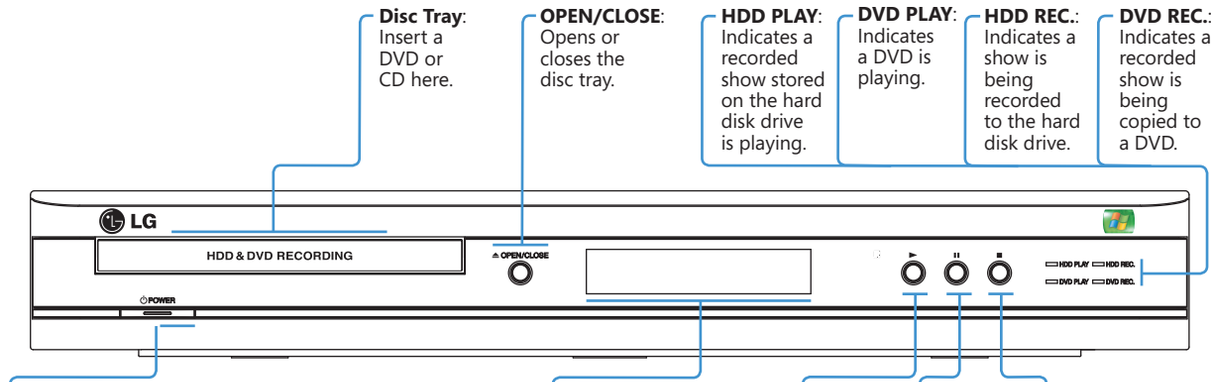
SUBTITLE Turn on or turn off DVD subtitles or scroll through available subtitle languages.

CH/PG Change TV channels one at a time on the Recorder.
In the on-screen lists (such as the Program Guide) advances the list one page at a time up or down.

Numeric keypad When watching live TV, enter a channel number and press OK to change to that channel.
In onscreen menus, enter numbers (such as your zip code during setup or a channel number when manually recording) or text (such as when searching for a program).

CLEAR Clears on-screen entries (such as Search text) one character to the left at a time. Clears the Guide or any on-screen menu or page.

LG LRM-519 Front Panel and Rear Panel



Disc Tray: Insert a DVD or CD here.

OPEN/CLOSE: Opens or closes the disc tray.

HDD PLAY: Indicates a recorded show stored on the hard disk drive is playing.

DVD PLAY: Indicates a DVD is playing.

HDD REC.: Indicates a show is being recorded to the hard disk drive.

DVD REC.: Indicates a recorded show is being copied to a DVD.

POWER: Turns the Recorder on and off. A blue light appears when the Recorder is turned on.

Display Window: Shows the current status of the Recorder.

▶ (Play): Play the DVD or CD inserted into the disc tray.

II (Pause): Pause playback of the DVD or CD.

■ (Stop): Stops playback of the DVD or CD.

ANT.IN: Connect VHF/UHF/CATV TV service.

RF BYPASS: Passes through the ANT.IN signal.

S-VIDEO OUT: Connect to a TV with an S-Video Input.

S-VIDEO IN: Connect a digital cable or satellite set-top box with an S-Video cable.

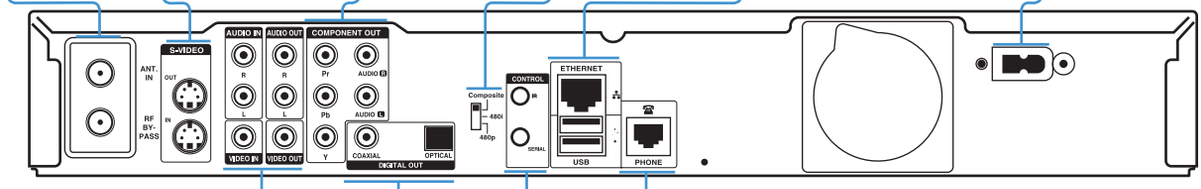
COMPONENT OUT: Connect to a TV with component (Y/Pb/Pr) inputs and audio inputs.

COMPOSITE/ 480i/480p: Set to COMPOSITE if using a video cable/S-Video cable to connect to the TV. Select 480i/480p if using component cables.

ETHERNET: Connect to an Ethernet network.

USB: Connect USB 2.0 drives or a USB wireless network adaptor.

Power cord: Connect the AC power cord.



AUDIO IN: Connect the audio output of a digital cable or satellite set-top box with audio cables.

VIDEO IN: Connect the video output of a digital cable or satellite set-top box with a video cable.

AUDIO OUT: Connect to a TV with audio inputs.

VIDEO OUT: Connect to a TV with video inputs.

DIGITAL OUT – COAXIAL: Connect to digital (coaxial) audio equipment.

DIGITAL OUT – OPTICAL: Connect to digital (optical) audio equipment.

CONTROL – IR: Connect the IR control cable (if used).

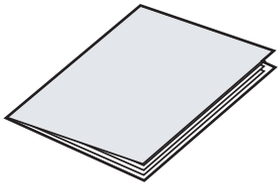
CONTROL – SERIAL: Connect the serial data control cable (if used).

PHONE: Connect a phone cable for dial-up connections.

Package Contents

Recorder

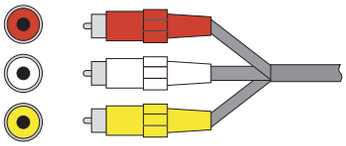
Quick Setup Guide, User's Guide



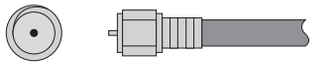
Remote control

2 AAA Batteries

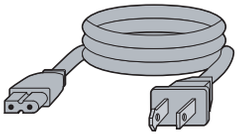
Composite audio/video cable



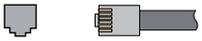
RF (coax) cable



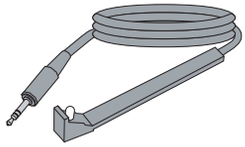
Power cord



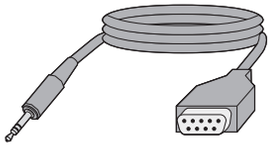
Phone cable (RJ-11)



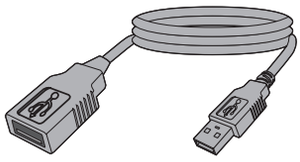
IR Control Cable



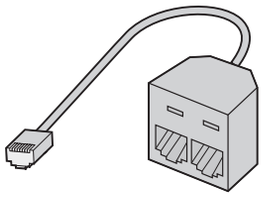
Serial data control cable



USB extender

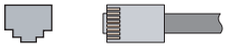


Telephone cable splitter

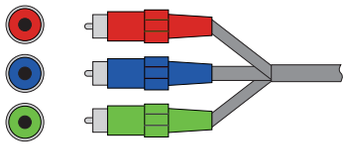


Optional accessories

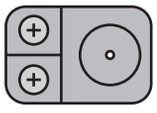
Ethernet cable (RJ-45)



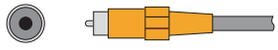
Component video cable



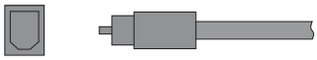
Antenna to RF/coax converter (splitter)



Digital audio cable

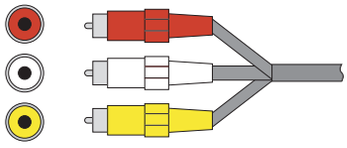


Optical (TOS) audio cable

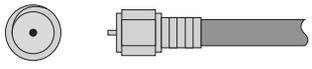


S-Video cable

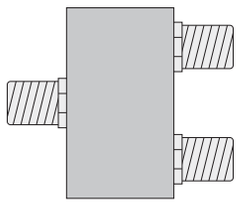
2nd Composite audio/ video cable



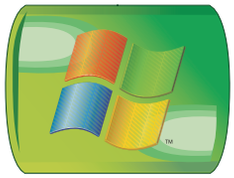
2nd RF/Coax cable



RF/coax cable splitter



Subscribe to the Microsoft® Program Guide



To receive all of the features of the LG LRM-519 Digital Media Recorder, you must subscribe to the Microsoft® Program Guide. Without a subscription to this service, the Recorder will have limited features.

To sign-up for the Microsoft Program Guide visit www.microsoftprogramguide.com on the web.

For a list of the features provided by the Microsoft Program Guide, see **The Microsoft® Program Guide** in the Appendix A.

Connect the Recorder to the TV, Audio Components, and Internet

There are four steps to connecting the Recorder.

- Connect a TV source or multiple TV sources (standard cable, digital cable, satellite receiver, or antenna) to the Recorder.
- Connect the video and audio from the Recorder to the TV. (If you have a Home Theater system, you can connect the audio to the amplifier or receiver instead of the TV.)
- Connect the Recorder to the Internet (broadband or dial-up service) to download the Program Guide and Software Updates.
- Program the Recorder remote control to operate the TV.

More information about each step is provided in the following sections.

Connect to the TV source

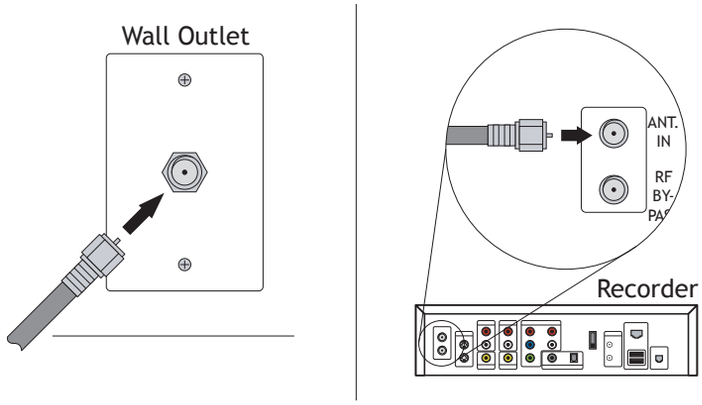
The TV source provides the TV service to your home. The TV source is typically an antenna, a standard cable, a digital cable service, or a satellite service.

Notes

- Labels for connections on TVs vary by brand. If you cannot find a connection as specified in the following instructions, refer to the TV documentation.
- Depending on the TV service, you can connect the service to the Recorder by using a S-Video cable, a composite cable, or an RF/coax cable. See the following sections for connection instructions.
- When you connect a digital cable set-top box or a satellite set-top box to the Recorder, you must use composite or S-Video cables. Using an RF/coax cable to connect a cable set-top box or a satellite set-top box to the Recorder is not supported.

Standard Cable

If you use RF/coaxial cable (Included)

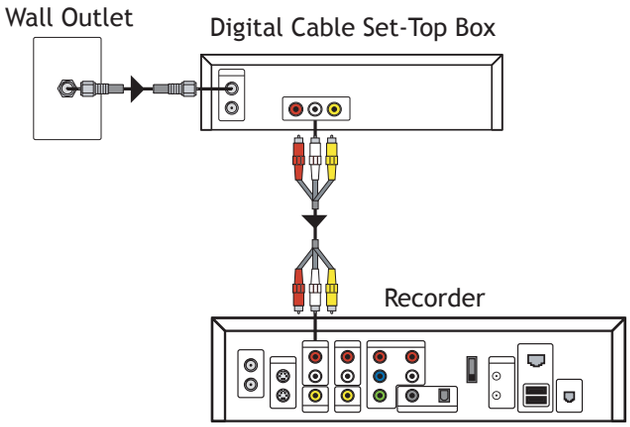


1. Connect an RF/coaxial cable to the cable connection in the wall.
2. On the Recorder, connect the RF/coaxial cable to the **ANT.IN** connector.

Digital Cable

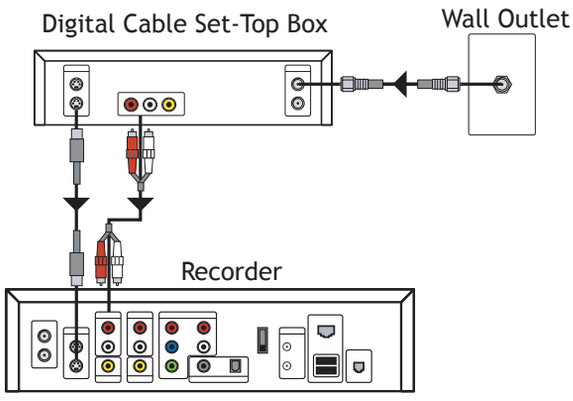
Note Using an RF/coax cable to connect a cable set-top box to the Recorder is not supported.

If you use composite cable (Included)



1. Connect the composite audio/video cables (red/white/yellow) to the composite out connection on the digital cable set-top-box.
2. On the Recorder, connect the composite video cable (yellow) to **VIDEO IN**. Connect the composite audio cables (red and white) to **AUDIO IN**.

If you use S-Video cable (Not included)



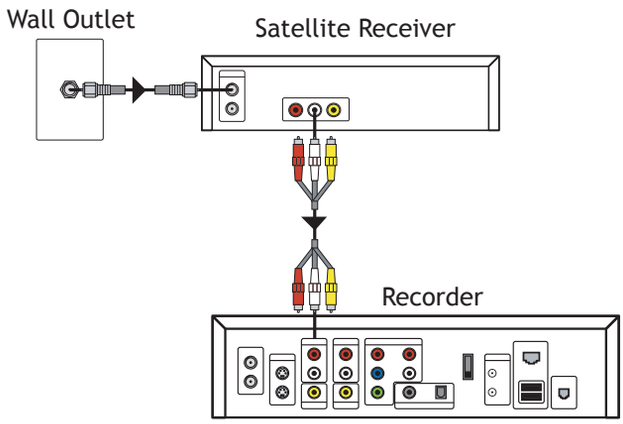
1. On the digital cable set-top box, connect the S-Video cable (not included) to the S-Video out connection.
2. On the Recorder, connect the S-Video cable to the **S-VIDEO IN** connection.
3. Connect the audio cables (red and white) from the audio out jacks on the digital cable set-top-box to the **AUDIO IN** audio connectors on the Recorder.

Satellite

Notes

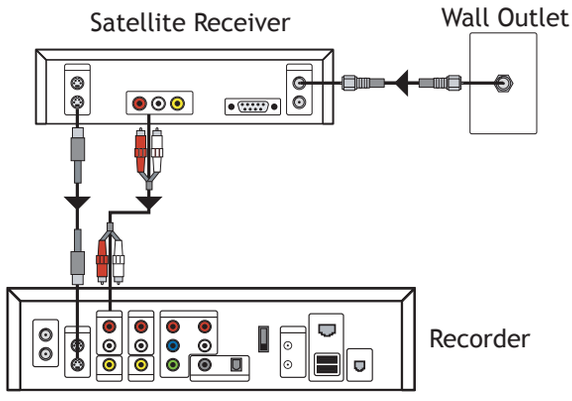
- The Recorder does not support satellite set-top boxes that do not have Composite (red/white/yellow), or S-Video output connections.
- Using an RF/coax cable to connect a satellite set-top box to the Recorder is not supported.

If you use composite cable (Included)



1. Connect the composite audio/video cable (red/white/yellow) to the composite out connection on the satellite receiver.
2. On the Recorder, connect the composite video cable (yellow) to **VIDEO IN**. Connect the composite audio cables (red and white) to **AUDIO IN**.

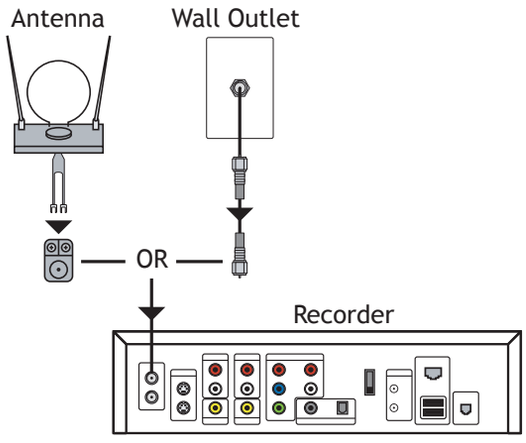
If you use S-Video cable (Not included)



1. On the satellite receiver set-top box, connect the S-Video cable (not included) to the S-Video out connection.
2. On the Recorder, connect the S-Video cable to the **S-VIDEO IN** connection.
3. Connect the audio cables (red and white) from the audio out connectors on the satellite receiver to the **AUDIO IN** audio connectors on the Recorder.

Antenna

Connect an antenna



1. Connect the antenna leads to an Antenna to an RF/coaxial converter.

2. On the Recorder, connect the RF/coaxial converter to the **ANT.IN** connector.

OR

1. Connect an RF/coaxial cable to the antenna connection in the wall.

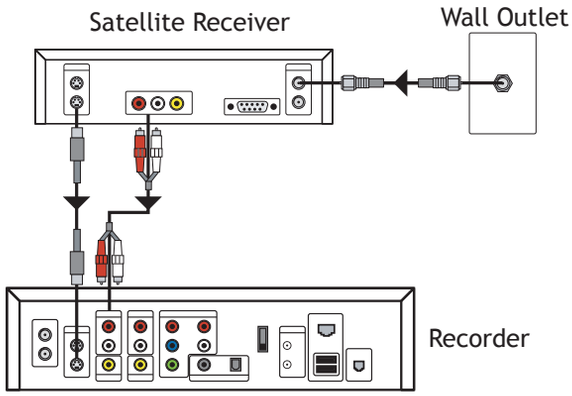
2. On the Recorder, connect the RF/coaxial cable to the **ANT.IN** connector.

Multiple TV sources

The Recorder supports multiple TV sources connected at the same time. You can connect satellite service and an antenna (for example, if you use an antenna to receive local channels and satellite for all other channels), or satellite service and standard cable service.

Satellite and Antenna

Connect the satellite receiver

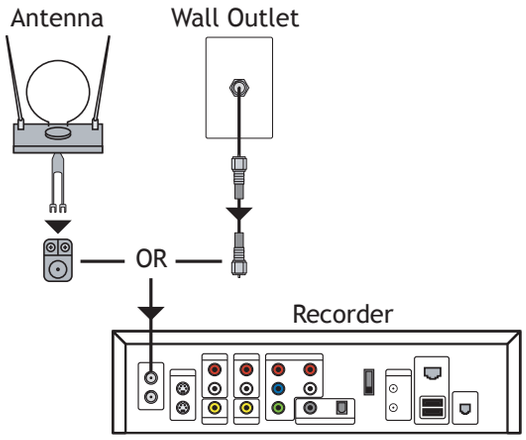


1. Connect the S-Video cable (not included) to the S-Video out connection on the satellite receiver.
2. On the Recorder, connect the S-Video cable to the **S-VIDEO IN** connection.
3. Connect the audio cables (red and white) from the audio out connectors on the satellite receiver to the **AUDIO IN** audio connectors on the Recorder.

OR

1. Connect the audio/video cables (red/white/yellow) to the composite out connection on the satellite receiver.
2. On the Recorder, connect the composite video cable (yellow) to **VIDEO IN**. Connect the composite audio cables (red and white) to **AUDIO IN**.

Connect the antenna

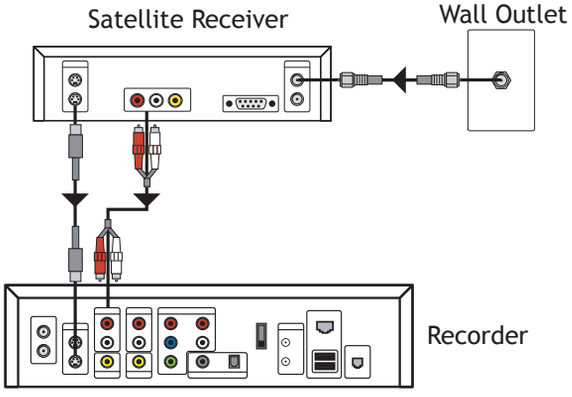


1. Connect the antenna leads to an Antenna to RF/coaxial converter or connect an RF/coaxial cable to an antenna wall connector.
2. On the Recorder, connect the Antenna to RF/coaxial converter or the RF/coaxial cable to the **ANT.IN** connector.

Satellite and Standard Cable

Note This configuration does not support standard cable with premium services that require a set-top box

Connect the satellite receiver

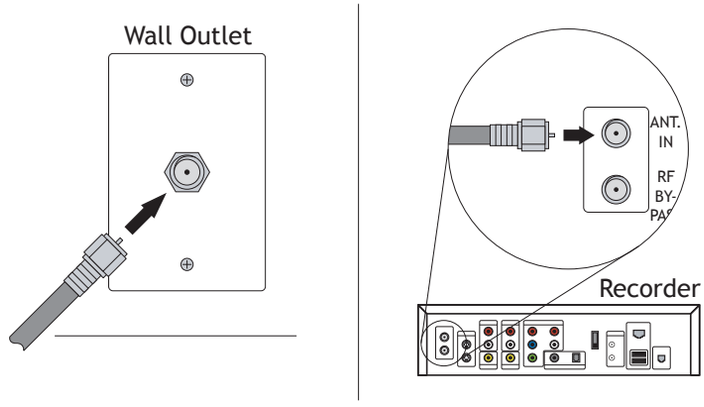


1. Connect the S-Video cable (not included) to the S-Video out connection on the satellite receiver.
2. On the Recorder, connect the S-Video cable to the **S-VIDEO IN** connection.
3. Connect the audio cables (red and white) from the audio out connectors on the satellite receiver to the **AUDIO IN** audio connectors on the Recorder.

OR

1. Connect the audio/video cables (red/white/yellow) to the composite out connection on the satellite receiver.
2. On the Recorder, connect the composite video cable (yellow) to **VIDEO IN**. Connect the composite audio cables (red and white) to **AUDIO IN**.

Connect the standard cable



1. Connect the RF/coaxial cable to the cable wall connection.
2. On the Recorder, connect the RF/coaxial cable to the **ANT.IN** connector.

Connect the Recorder to the TV

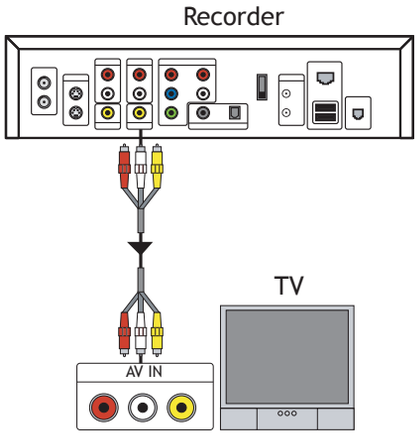
To connect the Recorder to the TV, you can use S-Video, Composite, or Component cables.

You may need to change the TV video source to use the Recorder. On your TV remote control or the front panel of your TV, press TV/VIDEO until you see the Recorder **Welcome** screen. The TV/VIDEO button might be marked SOURCE, INPUT, VIDEO 1, or VIDEO 2.

Important Connecting the Recorder to a TV by using an RF/coaxial cable is not supported.

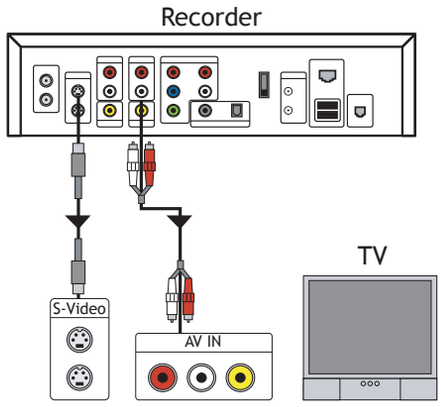
Note Labels for connections on TVs vary by brand. If you cannot find a connection as specified in the following instructions, refer to the TV documentation.

Use Composite Cables



1. On the Recorder, connect the composite video cable (yellow) to **VIDEO OUT**. Connect the composite audio cables (red and white) to **AUDIO OUT**.
2. On the TV, connect the composite cable to the composite In connections (for example, AV IN, TV IN).

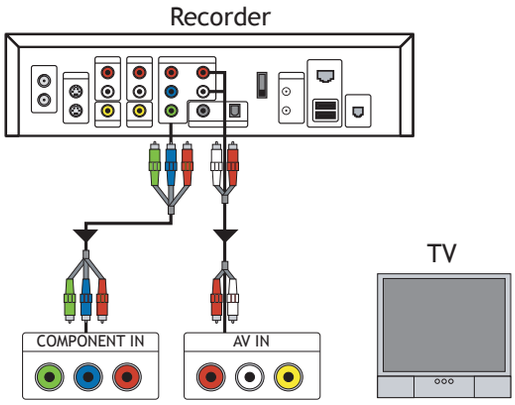
Use S-Video Cables



1. On the Recorder, connect the S-Video cable (not included) to the **S-VIDEO OUT** connection.
2. On the TV, connect the S-Video cable to the S-Video in connection.

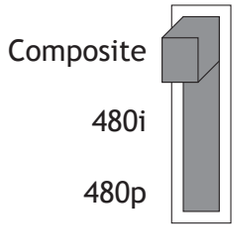
3. Connect the audio cables (red and white) from the **AUDIO OUT** connections on the Recorder to the audio in (red and white) connections on the TV.

Use Component Cables



1. On the Recorder, connect the component cables (Y/Pr/Pb) (not included) to the **COMPONENT OUT** connections.
2. On the TV, connect the component cables to the **COMPONENT IN** connections. These connections may be labeled as AV IN or TV IN.
3. Connect the audio cables (red and white) from the **AUDIO OUT** connections on the Recorder to the audio in connections (red and white) on the TV.

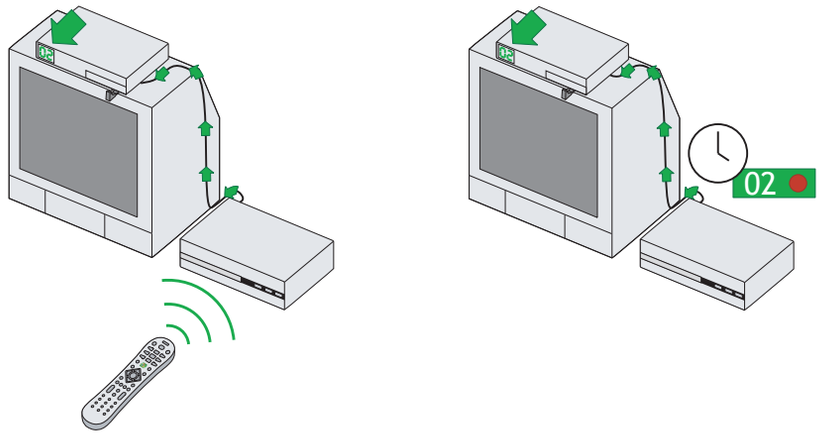
Using Composite versus 480i/480p



- When using composite or S-Video cables, make sure the composite/480i/480p switch is set to **Composite**.
- When using Component cables, make sure the switch is set to **480i** (interlaced) or **480p** (progressive scan), depending on your TV. If your TV supports both 480i and 480p, select **480p**. To determine if your TV supports 480i or 480p, refer to your TV documentation.
- To change the switch after you have been using the Recorder, make sure the Recorder is in Standby mode. To place the Recorder into Standby mode, press POWER on the front of the Recorder or POWER on the remote. When the Recorder is in Standby mode, the Power light will turn off and the time displays on the front panel. Change the switch and then turn on the Recorder.

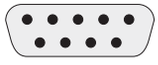
The IR Control Cable and the Serial Data Control Cable

If you have digital cable TV service or satellite TV service, you must use the IR control cable or the serial data control cable to connect the Recorder to the digital cable set-top box or the satellite receiver set-top box. When you change the channels by using the remote or when the Recorder must change the channel to record a show you have scheduled, the IR control cable or the serial data control cable sends a code to the set-top box to change the channel.



The IR control cable works with any set-top box that has a remote control. Plug the mini-jack on the cable into the Recorder, and then place the other end of the cable in front of the remote control receiver (or sensor) on the front of the set-top box.

The serial data control cable can only be connected to a satellite set-top box with a 9-pin serial input port. The mini-plug on the cable connects to the Recorder.

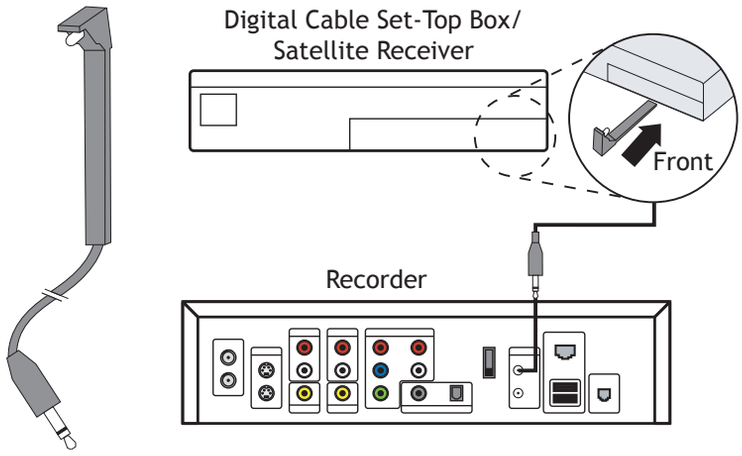


9-pin serial port

Notes

- The serial data control cable provides the best connection between the Recorder and a satellite set-top box. However, only a few satellite set-top boxes have a serial input port. If your satellite set-top box does not have this serial input port, you must use the IR control cable.
- During the on-screen setup process, the Recorder will ask you to select the brand and a manufacturer code for the digital cable or satellite set-top box to which your recorder is connected. Selecting the right brand and manufacturer code will allow the recorder to change channels on the cable or satellite set-top box using the IR control cable or serial control cable.
- Some satellite set-top boxes—including some DirecTV set-top boxes with Home Control or non-standard serial connections—require an additional cable to connect the Recorder to the satellite set-top box. To determine if your satellite set-top box requires this cable or to purchase the cable, contact your satellite set-top box retailer or the satellite service provider.
- Do not connect both the IR control cable and the serial data control cable to the satellite set-top box at the same time.
- Before you connect the serial data control cable, make sure the power cord for the Recorder and the power cord for the satellite set-top box are not plugged into a power outlet or power strip.

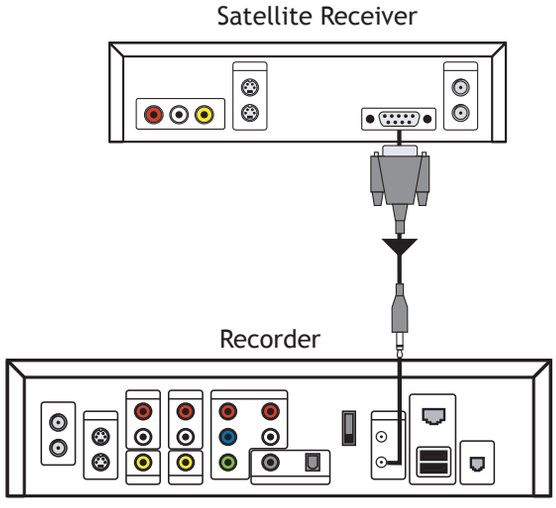
Connect the IR control cable



1. On the Recorder, connect the mini-jack of the IR control cable to the **IR** port.
2. On the IR control cable, attach the adhesive tape (included) to the flat surface just below of the blaster on the IR control cable.
3. On the digital cable set-top box or satellite set-top box, locate the remote control receiver/sensor.
   The remote control receiver/sensor is usually behind a small window on the front panel of the set-top box. If you cannot locate the receiver, shine a flashlight along the front of the set-top box. Refer to the set-top box documentation or contact your cable service or satellite service provider for more information.
4. Place the IR control cable blaster in front of the remote control sensor and press the top of the blaster (with the adhesive tape) to the surface below the set-top box.

OR

Connect the serial data control cable



1. On the satellite set-top box, connect the serial data cable to the 9-pin serial port.
2. On the Recorder, connect the mini-jack to the **SERIAL** port.

Digital Coaxial or Optical Audio Setup

Digital Audio cable

Digital audio cable provides 5.1 channel audio to an amplifier or TV that supports 5.1 channel audio.

Notes

- If the Recorder is connected to a home entertainment center amplifier/receiver or a TV that supports Dolby© Digital playback (a Dolby Digital decoder), select **Settings** on the **Start** menu, select **DVD Settings**, select **DVD Audio Output**, and then select **Bitstream** under **Dolby Digital**. Otherwise, select **PCM**.

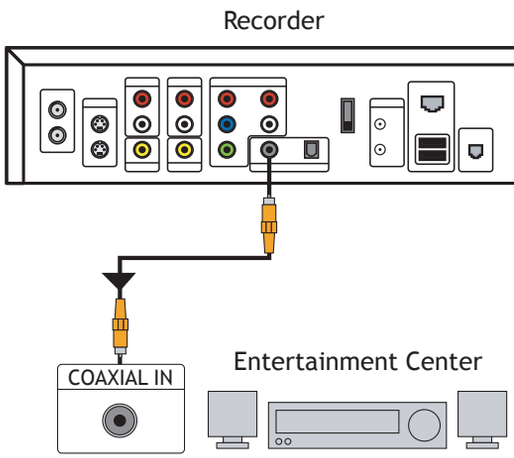
  Note Dolby© Digital playback—5.1 audio—is only available if:

  - The DVD that you are watching supports 5.1 channel audio.
  - Your home entertainment center amplifier/receiver supports 5.1 audio playback.
  - You have selected **Bitstream** under **Dolby Digital**.

- If the Recorder is connected to a home entertainment center amplifier/receiver or a TV that supports DTS playback, select **Settings** on the **Start** menu, select **DVD Settings**, select **DVD Audio Output**, and then select **Bitstream** under **DTS**. Otherwise, select **Off.**

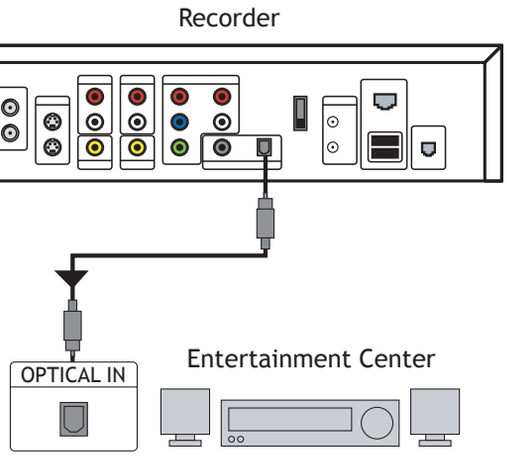
Note When **Bitstream** is selected, the Recorder sound effects are disabled. Analog audio output (provided through red and white audio cables connected to **AUDIO OUT** on the back of the Recorder) is also disabled.

Digital coaxial audio



1. On the Recorder, connect a digital audio coax cable (not included) to the **DIGITAL OUT – COAXIAL** connector.
2. On your home entertainment center amplifier or receiver or your TV, connect the digital audio coax cable to the Digital Audio In connector.

TOS cable



1. On the Recorder, connect an optical audio cable (not included) to the **DIGITAL OUT – OPTICAL** connector.
2. On your home entertainment center amplifier/receiver or your TV, connect the optical audio cable to the Optical In connector.

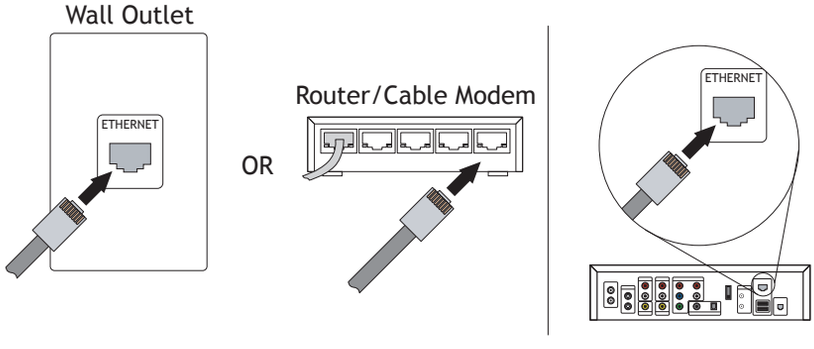
Connect to the Microsoft® Program Guide service

To connect to the Internet to receive daily updates for the Microsoft Program Guide service, the Recorder uses a broadband or dial-up connection. For broadband service, you can connect the Recorder to a wired network (Ethernet) or wireless network (802.11a, 802.11b, or 802.11g).

For information about the Microsoft Program Guide service, see **The Microsoft® Program Guide** in Appendix A.

Connect to a wired network (Ethernet)

Wired network connection



1. Connect the Ethernet cable to an Ethernet port in the wall, a router or a cable modem.
2. On the Recorder, connect the Ethernet cable to the **ETHERNET** port.

Connect to a wireless network (802.11)

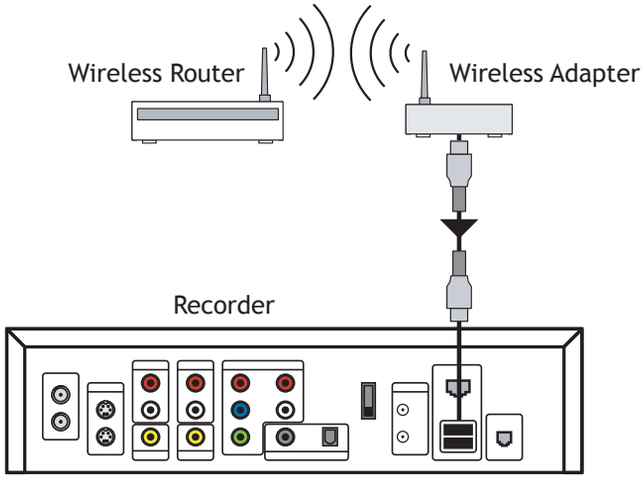
The Recorder supports 802.11a, 802.11b, or 802.11g wireless networks.

Important The USB wireless network adaptor must be supported by the Recorder. See the following list of supported USB wireless network adaptors. Additional USB wireless network adaptors that are supported can be found on the technical support website (www.LGusa.com/DigitalMediaRecorders).

Supported USB Wireless Network Adaptors

Brand	Model
D-Link	DWL-G120
Netgear	WG111 WG121

USB wireless network adaptor



- Connect a USB wireless network adaptor to the USB port on the Recorder.

Connect using dial-up

The Recorder supports dial-up connections to the Microsoft® Program Guide service.

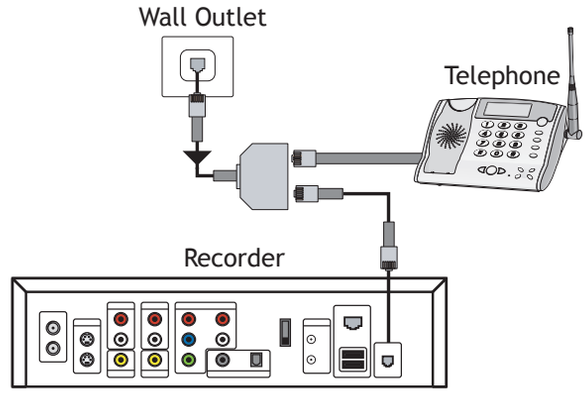
The Recorder attempts to dial the Microsoft Program Guide service once a day. If the Recorder receives a busy signal or no answer, another attempt is made. So your telephone usage is not interrupted, the Recorder dials the service during early morning hours.

Warning Toll charges may apply if using a long-distance number to connect to the service. For more information, check with your phone company.

Notes

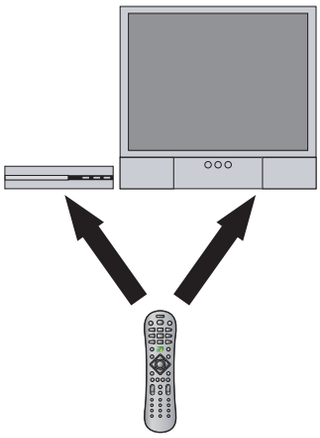
- Assign more than one dial-up number. If a number is busy or fails to answer, the Recorder will try dialing any additional numbers you selected first setup the Recorder.
- You can use a phone line splitter (included) to connect both the Recorder and a telephone to the same phone jack in the wall.

Dial-up connection using a telephone line



- Connect the phone cable to a telephone jack and the **PHONE** port on the Recorder.

Program the Remote to Control the TV



You can program the Recorder remote to control some of the functions on your TV. These include:

- Turn on or turn off the TV
- Change the volume on the TV
- Mute the TV
- Change the input source on the TV (for example, if you have a VHS player connected to the TV as well as the Recorder)

To use the remote to control your TV, you must program the remote with a TV manufacturer code. See a list of the codes in the following table of **TV Manufacturer Remote Control Codes**.

To program the remote to control the TV

1. Make sure your TV is turned on.
2. On the Recorder remote, press and hold the TV POWER button.
3. Using the numeric keypad, enter the manufacturer code for your TV.
4. Your TV will turn off if the code is correct.
5. Press TV POWER. Your TV should turn on. Press VOL+/- to change the volume or toggle MUTE to turn the sound on or off.
6. If the buttons do not turn the TV off or on, change the volume, or mute the TV, repeat steps 2 to 5 using a different code for the TV manufacturer.

Notes

- The remote control is programmed to control LG brand TVs by default.
- If you enter a new code number, the code number previously entered will be erased.
- After you replace the batteries in the remote, the code number you have set may be reset to the default setting. If the remote does not change the volume or mute the TV after you change the batteries, re-enter the code.

TV Manufacturer Remote Control Codes

Brand	Codes	Brand	Codes
A MARK	112 143	JVC	034 038 070 083 145
ADMIRAL	072 081 161	KEC	043
AKAI	006 146	KENWOOOD	006 070
AMPRO	073 167	KLOSS	002 059
AMSTRAD	052	KMC	143
ANAM	026 043 054 056 080 104 108 112 115 118 121 131	KTV	006 043 143 154
AOC	004 006 058 112	LG	001 004 102 106 110 112 113 116 119 122 127 137 143
BLAUPUNKT	088	LODGENET	072
CANDLE	002 003 004 006	LOGIK	072
CAPEHEART	058	LUXMAN	004
CETRONIC	043	LXI	007 015 052 081 160 164 166
CITIZEN	002 003 004 006 043 101 103 143	MAGNAVOX	003 004 006 022 059 060 061 063 064 127 143 160 164
CLASSIC	043	MARANTZ	006 077 164
CONCERTO	004	MATSUI	164
CONTEC	039 043 050 051	MEMOREX	004 007 072 116
CORONADO	143	METZ	088
CRAIG	043 054	MGA	004 006 024 028 042 049 077 116
CROWN	043 143	MINERVA	088
CURTIS MATHES	004 006 101 116 143	MITSUBISHI	004 006 024 028 040 042 109 116 124 146
CXC	043	MTC	004 006 062 101
DAEWOO	004 016 017 043 044 055 071 076 103 107 111 114 117 120 123 125 127 128 136 143	NAD	015 025
DAYTRON	004 116 143	NEC	006 007 016 019 024 040 056 130 132 134
DYNASTY	043	NIKEI	043
DYNATECH	062	ONKING	043
ELECTROHOME	024 077 143	ONWA	043
EMERSON	004 005 006 028 043 047 048 050 051 096 116 143 151 153 154 155	OPTONICA	019 081
FISHER	007 057	PANASONIC	034 056 080 092 164
FUNAI	028 043	PHILCO	003 004 006 024 043 056 059 060 063 064 127 143 164
FUTURETECH	043	PHILIPS	003 004 005 006 038 059 070 093 143 160 164
GE	004 006 008 009 034 056 073 074 091 116 130 144 155 160 161 165	PIONEER	006 018 023 025 027 116 135 176
HALL MARK	004 116	PORTLAND	004 143
HITACHI	004 006 009 010 011 012 023 041 075 143 158 163 166 187	PROSCAN	144 160 161 165 167
INFINITY	164	PROTON	004 058 116 131 143 171 173
INKEL	129	QUASAR	034 056 092
JBL	164	RADIO SHACK	004
JCPENNY	004 006 008 009 024 030 065 101 143 156 160	REALISTIC	007 019 043 047
JENSEN	013	ROCTEC	186

Brand	Codes	Brand	Codes
RUNCO	168 169	TECHWOOD	004
SAMPO	004 006 058 116	TEKNIKA	002 003 004 006 024 028 031 043 072 077 101 103 143
SAMSUNG	004 050 089 101 105 113 116 127 133 137 143 160	TELEFUNKEN	037 046 086 087
SANYO	007 020 021 033 039 053 057 082 166	TELERENT	072
SCOTT	004 028 043 048 116 143	TERA	172
SEARS	004 007 015 028 030 057 082 094 101 116 143 160	TMK	004 116
SHARP	004 014 019 022 028 029 081 143 170 175	TOSHIBA	007 015 030 040 051 062 101 138
SIEMENS	088	TOTEVISION	143
SIGNATURE	072	UNIVERSAL	008 009
SONY	041 070 079 126 139 147 185	VIDEO CONCEPTS	146
SOUNDESIGN	003 004 028 043 116	VIDIKRON	174
SPECTRICON	112	VIDTECH	004 116
SSS	004 043	WARDS	004 008 009 019 028 060 061 063 064 072 074 116 143 164
SUPREMACY	002	YAMAHA	004 006
SYLVANIA	003 004 006 044 059 060 063 064 116 127 140 160 164	YORK	004 116
TANDY	081	YUPITERU	043
TATUNG	056 062	ZENITH	001 072 073 095 103 157
TECHNICS	034 080 084	ZONDA	112

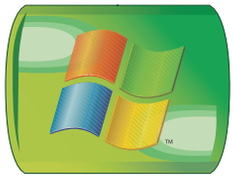
Connect the Power to the Recorder and Turn on the TV

1. Attach the power cord to the Recorder and plug the power cord into a power strip/surge protector or a wall outlet.
2. Turn on the TV.
3. Press POWER on the Recorder.

The TV should now display the **Welcome** screen for the Recorder Setup Wizard.

Note You may need to change the TV video source to use the Recorder. On your TV remote control or the front panel of your TV, press TV/VIDEO until you see the **Welcome** screen for the Recorder Setup Wizard. The TV/VIDEO button might be marked SOURCE, INPUT, VIDEO 1, or VIDEO 2.

Set up the Recorder



To provide TV services, you must determine the following:

- Which type of TV service you are using
- Who provides your TV service (if using cable or satellite)
- If you will connect the Recorder to a broadband or dial-up connection to download Microsoft® Program Guide service information.

If you use a broadband connection, the Recorder can connect to computers on your home network to share recorded shows or access music and picture files.

Remember The first time you schedule a recording, LG will guide you through the process for free. Contact LG at 800-984-6306.

Subscribe to the Microsoft Program Guide

To receive all of the features of the LG LRM-519 Digital Media Recorder powered by Windows® Media Center Technologies, you must subscribe to the Microsoft® Program Guide. Without a subscription to this service, the Recorder will have limited features.

To sign up for the Microsoft Program Guide service visit www.microsoftprogramguide.com.

For a list of the features provided by the Microsoft Program Guide, see **The Microsoft® Program Guide** in Appendix A.

Welcome to Setup

After you turn on the TV and press the POWER button on the Recorder, the Welcome screen for the Setup Wizard displays. The Setup Wizard gathers the information needed by the Recorder to provide you with TV viewing, programming, and recording features.

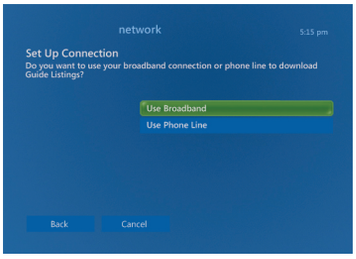
As you proceed through the Setup Wizard, you will need to know the following:

- what type of connection you will use for downloading Program Guide information
- your ZIP code so the Recorder will know what TV providers are in your area
- your TV provider
- the brand of your digital cable set-top box or satellite set-top box (if you have digital cable service or satellite service).

Terms of Service and End-User License Agreement

You must agree to the Terms of Service and the End-User License Agreement before you can use the Recorder.

1. Set up Connection



The Recorder can connect to the Microsoft® Program Guide service by using a broadband or dial-up connection to the Internet. When connected, the Service will download updated TV show information on a regular basis (up to 14 days of information at one time).

To connect to the service, select either **Use Broadband** or **Use Phone Line**.

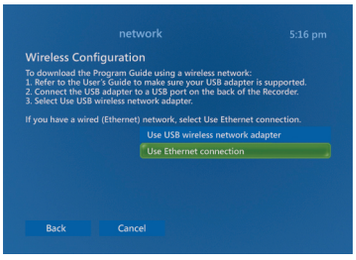
If you select **Use Phone Line**, see step **1b**.

Note When you connect the Recorder by using a broadband network connection, you can also copy recorded shows to another computer and use Windows® Media Connect to access music and pictures stored on another computer.

1a. Use Broadband

The Recorder supports both wired (Ethernet) and wireless (802.11 a/b/g) networks.

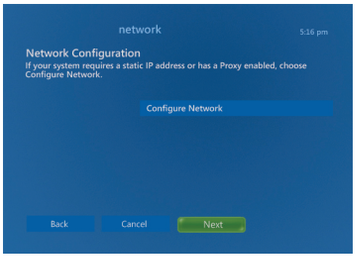
Wireless Configuration


network
5:16 pm
Wireless Configuration
To download the Program Guide using a wireless network:
1. Refer to the User's Guide to make sure your USB adapter is supported.
2. Connect the USB adapter to a USB port on the back of the Recorder.
3. Select Use USB wireless network adapter.
If you have a wired (Ethernet) network, select Use Ethernet connection.
Use USB wireless network adapter
Use Ethernet connection
Back
Cancel

- To connect to a wireless network, select **Use USB Wireless Network Adaptor**.
- To connect to a wired network, select **Use Wired (Ethernet) Connection**.

If You Select "Use USB Wireless Network Adaptor"

If you have a wireless network, attach a USB wireless network adaptor to a USB port on the Recorder. Make sure the adaptor is supported by the Recorder. For a list of supported USB wireless network adaptors, see **Supported USB Wireless Network Adaptors**.



Note When you attach a USB wireless network adaptor to the Recorder, do not attach an Ethernet cable to the Ethernet port. You can have only one connection to the network at a time.

A list of wireless networks is displayed. The list also includes whether the networks are more secure and the signal strength of the connection. To connect to one of the displayed networks, select the network in the list.

If the network you connect to is secured, select the appropriate security protocol:

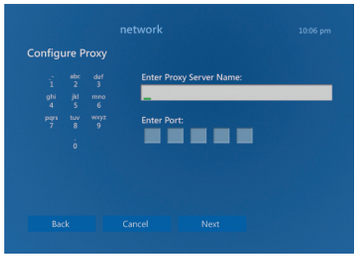
- WEP
- WPA

Use the numeric keypad on the remote to enter the key or passphrase for the network. If you make a mistake, use CLEAR to delete characters.

If You Select "Use Wired (Ethernet) Connection"

If your network uses dynamic IP addresses and no Proxy server, select **Next**.

If your network uses a static IP address or a Proxy server, select **Configure Network**.



Select **Static IP address**, and then use the numeric keypad on the remote to enter the IP address, subnet mask, default gateway address, and DNS address.

Notes

- Each group of numbers in the addresses must be three digits; add leading zeros (0) as needed. For example, if the fourth section of the subnet mask is "0" enter **000**.
- To clear an entry, use the arrow keys on the remote to select the incorrect entry, and then enter the correct number.

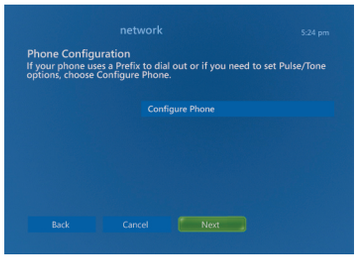
If you use a proxy server, select **Configure Proxy Server**. Enter the proxy server name by using the remote, and any port if needed.

Notes

- If the port is less than five digits, add leading zeros (0) as needed. For example, enter port 8085 as **08085**.
- To clear an entry, use the arrow keys on the remote to select the incorrect entry, and then enter the correct number.

1b. Use Phone Line

The Recorder can use a dial-up connection to the Internet to download the Microsoft® Program Guide service and software updates.



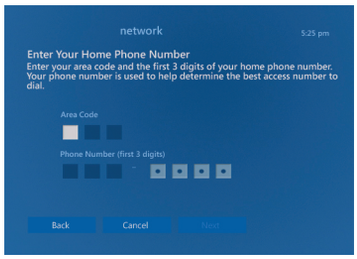
Important When using a dial-up connection, a software update can take up to 90 minutes to download; Program Guide updates can take up to 20 minutes or longer. For more information, see **Downloading the Program Guide and Software Updates**.

Phone Configuration

If your dial-up connection requires pulse dialing (instead of tone dialing) or if you must dial a prefix to get an outside phone line, select **Configure phone**.

If the dial-up connection uses tone dialing and does not use a dialing prefix, select **Next**.

Enter Your Home Phone Number


network
5:25 pm
Enter Your Home Phone Number
Enter your area code and the first 3 digits of your home phone number. Your phone number is used to help determine the best access number to dial.
Area Code
Phone Number (first 3 digits)
Back
Cancel
Next

To determine the best phone numbers the Recorder should use to connect to the Microsoft Program Guide service, use the numeric keypad on the remote to enter the area code and prefix (first three digits) of your phone number.

Note To clear an entry, use the arrow keys on the remote to select the incorrect entry, and then enter the correct number.

Phone Connection

Select **Next** and the Recorder attempts to dial out using the phone line. If the dial-out is successful, the **Choose Dial-up Number** screen appears.

Note If the dial-out is not successful, try the following: check to your phone connections; check to see if there is a voice mail message indicator (tone) on your phone; and make sure your telephone configuration options are correct (do you need to dial a 9 for an outside line, for example).

Choose Dial-up Number

A list of phone numbers that the Recorder can use to connect to the Microsoft® Program Guide service is displayed. If more than one phone number is available, select at least two phone numbers. The second number selected in the list is a backup phone number in case the first number is busy or out of order. You can select up to ten numbers.

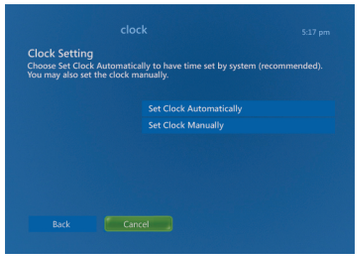
Warning Toll charges may apply if using a long distance number to connect to the service. For more information, check with your phone company.

Note The Recorder can connect to a network by using broadband and download Guide listings by using a dial-up connection, at the same time. The Recorder uses the most recent connection you have selected in Setup to connect to the Internet.

1. While setting up a connection in the Setup Wizard, select **Use Broadband**.
2. Follow the steps in section **1a. Use Broadband**.

   Note If you have completed setup and need to switch to broadband, you can change the connection type by selecting **Start > Settings > Phone and Network Setup**.
3. Complete the Setup Wizard.
4. On the **Start** menu, select **Settings > Phone and Network Setup**.
5. Select **Use Phone Line**.
6. Follow the steps in section **1b. Use Phone Line**.

2. Clock Setting



The clock for the Recorder can be set automatically (recommended) or manually.

- Select **Set Clock Automatically**, and then select your time zone and whether the area where you live observes Daylight Savings Time.
- If the automatic clock settings do not work correctly—such as the clock is one minute behind or ahead—select **Set Clock Manually**. You can set the clock manually after setup is complete by selecting **Settings > System Information**.

3. Subscription Status

At this point, the Recorder checks the status of your subscription to the Microsoft® Program Guide service. If a subscription was found, select **Next** to continue.

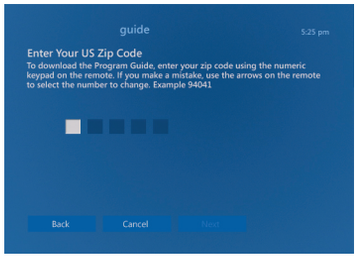
Note If the connection to the Microsoft Program Guide service fails, see **Troubleshooting** in Appendix B.

If a subscription to the Microsoft Program Guide service was not found, try one of the following.

- If you have subscribed to the Microsoft Program Guide service, select **I registered, try again**. The Recorder will attempt to locate your registration information again. If the subscription cannot be found, follow the instructions onscreen for assistance.
- If you have not subscribed to the service, select **Continue without registering**. You can subscribe to the Microsoft Program Guide service at a later time.

Note If you do not have a subscription, the Program Guide listings will be unavailable and you will not have all the features of the Recorder. For more information, see **The Microsoft® Program Guide service** in Appendix A.

4. Enter your ZIP Code

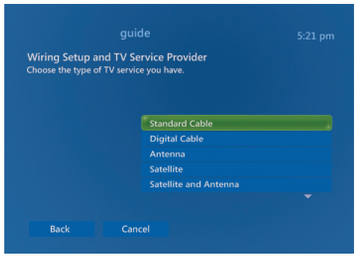

guide
5:25 pm
Enter Your US Zip Code
To download the Program Guide, enter your zip code using the numeric keypad on the remote. If you make a mistake, use the arrows on the remote to select the number to change. Example 94041
Back
Cancel
Next

Your ZIP code is used to provide the different service providers such as cable providers and satellite providers available in your location.

Use the numeric keypad on the remote to enter your ZIP code, and then select **Next**.

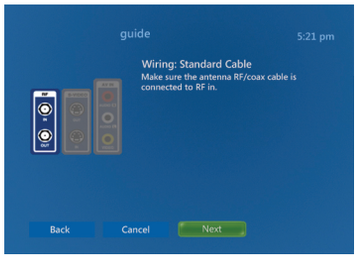
Note To clear an entry, use the arrow keys on the remote to select the incorrect entry, and then enter the correct number.

5. Wiring Setup and TV Service Provider



The Recorder supports the following TV services:

- Standard cable (which includes basic cable and enhanced basic cable services)
- Digital cable
- Satellite service
- Antenna (a TV set-top antenna or an exterior antenna attached to your home)
- Satellite service and antenna
- Satellite service and standard cable service

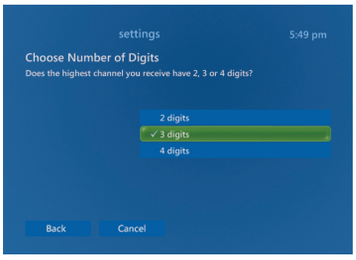


Select your TV service. After you select the TV service, a wiring screen appears to confirm the connections required between your TV service and the Recorder. If the connections are correct, select Next to continue. For more information about these connections, refer to **Connect the Recorder to the TV, Audio Components, and Internet**.

TV Service Provider

Select your TV service provider, including standard cable provider, digital cable provider, or satellite provider.

If you have digital cable service or satellite TV service, select the brand of TV service set-top box. If you do not know the brand, see your TV service documentation or contact your TV service provider.



Choose Number of Digits and How You Change Channels

If you have digital cable service or satellite service, select the highest number of channels you receive through your cable set-top box or satellite set-top box: two digits, three digits, or four digits.

Note The Recorder adds leading zeros to channel numbers that have fewer digits than you selected above. For example, if you select "4-digits" the Recorder sends "0044" to the digital cable set-top box or the satellite set-top box to change to channel 44. If the channel does not change correctly, the set-top box may not recognize the leading zeros. To correct this, select **Yes, I have to press ENTER or OK** on the **How do you change channels?** page. You can change this setting by selecting **Start > Settings > Guide Setup > Set up TV Signal and Guide**.

When you have to enter a channel manually, how do you enter it? Do you:

- Enter the channel number using a remote control, and then the channel changes?
- Enter the channel number using a remote control, and then press OK or ENTER to change the channel?

If you press OK or ENTER, the Recorder enter the OK or ENTER for you. When you enter a channel number by using the Recorder remote, the Recorder will also "press" OK for you; you won't have to press it.

After you select the actions that change the channels, set up the Recorder to change the channels by using the IR control cable or the serial data control cable.

Note Although many cable set-top boxes and satellite set-top boxes do not require you to press OK or ENTER to change a channel by using the set-top box remote control, some of these set-top boxes cannot be controlled by the Recorder remote control without OK or ENTER being pressed. You may need to select the OK or ENTER option if you find the Recorder remote does not change the set-top box channels properly.

6. Set up the Recorder to Change Channels on the Set-top Box

If you have digital cable or satellite TV service, you must connect the cable set-top box or the satellite set-top box to the Recorder so the Recorder can change the channels on the set-top box.

Important For the Recorder to record programs received through a cable set-top box or a satellite set-top box, the cable set-top box or the satellite set-top box must remain turned on at all times.

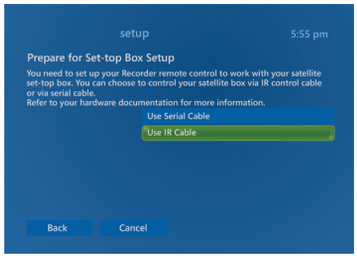
The IR Control Cable and the Serial Data Control Cable

The Recorder includes two cables used to change channels on a set-top box. Some satellite set-top boxes have a 9-pin serial input port that is connected to the Recorder by using the serial data control cable. Digital set-top boxes and most satellite set-top boxes are connected to the Recorder with an IR control cable. These cables allow the Recorder to send the same codes that the set-top box remote controls send to change channels on the set-top boxes.

Note Many cable set-top boxes and satellite set-top boxes do not require you to press OK or ENTER to change a channel by using the set-top box remote control. However, some of these set-top boxes cannot be controlled by the Recorder remote without using OK or ENTER. To change to using OK or ENTER when changing channels, display the **Start** menu and select **Settings > Guide Listings > Set up TV Signal and Guide**.

Prepare for Set-top Box Setup

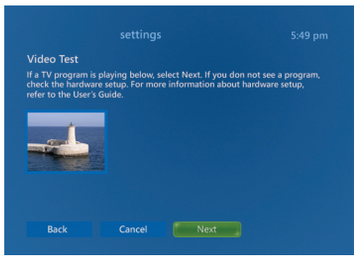
If you have satellite TV service, select **Use a serial cable** or **Use an IR cable**.


setup
5:55 pm
Prepare for Set-top Box Setup
You need to set up your Recorder remote control to work with your satellite set-top box. You can choose to control your satellite box via IR control cable or via serial cable.
Refer to your hardware documentation for more information.
Use Serial Cable
Use IR Cable
Back
Cancel

Note Some satellite set-top boxes have a 9-pin serial port that does not support input information. In this case, make sure you connect the IR control cable instead of the serial cable. For more information, see your satellite service hardware documentation.

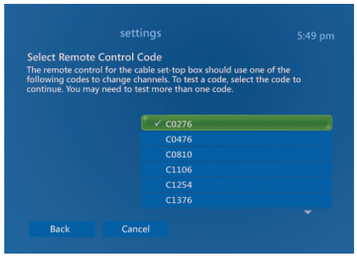
Video Test

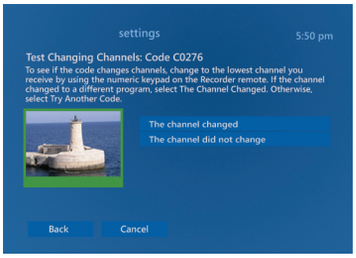
On the Video Test page, make sure a TV show is playing on the page. If a show is playing, select Next. If a show is not playing, verify your connections between the TV service set-top box and the Recorder. For more information, see **Connect the Recorder to the TV, Audio Components, and Internet**.


settings
5:49 pm
Video Test
If a TV program is playing below, select Next. If you don not see a program, check the hardware setup. For more information about hardware setup, refer to the User's Guide.
Back
Cancel
Next

Select Remote Control Code

You must determine which set of codes the Recorder will use to change the channels on the set-top box. The list of codes displayed onscreen are based on the brand of set-top box you selected. Each brand of set-top box can have multiple sets of codes. One code will be tested at a time; if the code does not work, select another code to test.


settings
5:49 pm
Select Remote Control Code
The remote control for the cable set-top box should use one of the following codes to change channels. To test a code, select the code to continue. You may need to test more than one code.
✓ C0276
C0476
C0810
C1106
C1254
C1376
Back
Cancel


settings
5:50 pm
Test Changing Channels: Code C0276
To see if the code changes channels, change to the lowest channel you receive by using the numeric keypad on the Recorder remote. If the channel changed to a different program, select The Channel Changed. Otherwise, select Try Another Code.
The channel changed
The channel did not change
Back
Cancel

Test Changing Channels

This test checks to see if the code you selected will change channels. Use the numeric keypad on the Recorder remote to change to the lowest channel you receive through your set-top box—such as channel 2.

Note In this test the channel does not need to change to the lowest channel; the TV image just needs to change to another channel.

- If the channel changed to a different show, select **The channel changed**.
- If the channel did not change to another show, select **Try another code**. Select another remote control code and run this test again.

settings
5:50 pm
Speed Test: FAST
Test 1 of 3
If the Recorder sends the code at the wrong speed, the wrong channel may be selected. Change the channel 6 times starting with the highest channel you receive by using the numeric keypad on the remote. If the channel does not change correctly each time, select Try Another Speed.
The channel changed
Try another speed
Back
Cancel

Speed Test

At this point the code is tested for changing to the correct channel. In addition, some remote controls send codes more quickly than other remote controls. The speed test also tests the speed the Recorder should send the code to the set-top box.

There are three possible speeds: Fast, Medium, and Slow. The first speed tested is Fast.

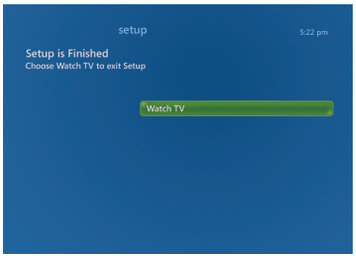
To test the speed

1. Tune to the highest channel you receive through the set-top box by using the numeric keypad on the Recorder remote—the highest channel in your channel list, such as channel 599 or channel 9406.
2. Change the channel at least six more times by using the numeric keypad on the remote.
   - If the channel changed correctly each time, select **The channel changed**.
   - If the channel did not change correctly each time, select **Try another speed**.

If the fast speed test fails, repeat the same procedure for the medium speed test. It the medium test fails, try the slow speed test. If the slow speed test fails, select **Try another code** and select a different remote control code to test.

Recorder Remote Control Settings

After all of the remote control settings for the Recorder are set up, the Recorder displays the final settings it will use to change the channels.



7. Watch TV

After Setup is complete, you are ready to watch TV.

Downloading the Program Guide and Software Updates

To receive the Program Guide, subscribe to the Microsoft® Program Guide service. For more information about the service, see **The Microsoft® Program Guide service** in Appendix A.

Note The Recorder can connect to a network by using broadband and download Guide listings by using a dial-up connection, at the same time. For more information, see **1. Set up Connection** in **Set up the Recorder**.

The First Time You Setup The Recorder

After you complete setting up the Recorder and begin to watch TV, the Recorder checks to see if there is an update to the Recorder software. If there is a newer version of the software, the Recorder automatically downloads the updated software and then the current Program Guide.

Future Program Guide Updates

The Recorder attempts to download Program Guide updates daily, during early morning hours.

Important

- When updating the Program Guide, the updated Guide information is downloaded and then merged into the Guide. The download can take 15 minutes or longer depending on your network connection and network conditions. The process of merging the first 12 hours of Guide listings can take 30 minutes or longer. During the first download of the Program Guide listings, the Guide will not contain information immediately. The complete Guide update may take up to 3 hours.
- You can check the status of the current Program Guide update or the last time the Guide successfully updated by selecting **Start > Settings > Guide Settings > Get Latest Guide Listings**.
- You can download the latest Program Guide by selecting **Start > Settings > Guide Settings > Get Latest Guide Listings** and select **Download Now**.
- When the Program Guide is being updated over a dial-up connection, you can stop the download to make a phone call. If you pick up your phone you will hear the the Recorder receiving data. Hang up the phone, and then pick the phone up again. This will stop the download and disconnect the Recorder. After you make your phone call, the Recorder will automatically reconnect at a later time and continue the download.

Future Software Updates

Software updates download as necessary during updates to the Program Guide.

Important

- If you have a broadband connection, a software update download can take 5 minutes or longer, followed by the Program Guide download and update. The download time can be shorter or longer depending on network traffic.
- If you have a dial-up connection, a software update download can take up to 90 minutes, followed by the Program Guide download and update. The download time can be shorter or longer depending on your modem speed and network conditions.
- When the software is being updated over a dial-up connection, you can stop the download to make a phone call. If you pick up your phone you will hear the the Recorder receiving data. Hang up the phone, and then pick the phone up again. This will stop the download and disconnect the Recorder. After you make your phone call, the Recorder will automatically reconnect at a later time and continue the download.

Parental Controls and Locks

settings
11:55 am
settings
Cancel
Parental Locking
Create a new PIN
To create a new PIN, use the numeric keypad on the remote and select Done. If you make a mistake, use the arrow keys to go back.
Done

Create a parental lock PIN to restrict what can be watched by show rating or by channel.

The Parental Control PIN is requested when:

- You are watching an unrestricted show and tune to a restricted show by entering a channel number or by using **CH/PG** on the remote.
- By selecting a restricted show in the Program Guide.
- You are viewing an unrestricted show and a restricted show starts.

To set the Parental Control Lock, press Start on the remote, and then select **Settings > Parental Control**.

Create a Parental Control PIN

Create a Parental Control PIN using the numeric keypad on the remote. This PIN must be four digits long. Re-enter the PIN to confirm it.

Set the Parental Control Policy

settings
11:55 am
settings
Cancel
Parental Locking
Create a new PIN
To create a new PIN, use the numeric keypad on the remote and select Done. If you make a mistake, use the arrow keys to go back.
Done

The Parental Control Policy sets which shows and channels are restricted based upon ratings (both motion picture ratings such as G-rated, PG-rated, or R-rated, and TV rating such as TV-MA or TV-17) or you can lock by channel. You can also restrict the viewing of DVDs based upon the DVD rating.

Note When you enter the Parental Control PIN, the Recorder is unlocked and the restrictions for the ratings are removed. To lock the Recorder again, select **Settings > Parental Control > Turn on Lock Policy**.

Lock by Rating

To restrict watching shows and movies according to the rating for the show, select **Lock by Rating**, and then select the rating you want to restrict. When you select a rating, all ratings above the one you select are restricted as well. For example, if you select PG-13, movies rated PG-13 or R are restricted.

Note If the Program Guide does not contain any information, TV shows cannot be locked by rating. Once the Program Guide contains program information, the rating for each program is available and TV shows can be restricted by rating. For information about updating the Program Guide, see **Downloading the Program Guide and Software Updates.**

Lock by Channel

To lock specific channels from view, select **Lock by Channel**. Then select each channel you want to block with a parental lock.

Lock DVD

With **Lock DVD** you can restrict viewing of any DVD by DVD rating. When a DVD is inserted into the Recorder the DVD rating (which is different from a movie rating) is checked by the Recorder. If the rating is locked, enter the Parental Control PIN to unlock the DVD.

Note When you enter the Parental Control PIN to watch a DVD, the DVD is unlocked for the current session only. If you stop playback of a DVD, the parental lock PIN will be required to watch the DVD again or watch another DVD.

Turn on Lock Policy

Select **Turn on Lock Policy** to enable the parental control lock after you have unlocked restricted shows or DVDs.

Change PIN

To change the PIN, select **Change PIN**, and then enter a new PIN.

Reset

To remove all parental control locks and the Parental Control PIN, select **Reset**.

Forgot the Parental Control PIN?

If you forget the Parental Control PIN, you can change the PIN by using the Change PIN Authorization Number.

1. If a message requests the Parental Control PIN (see Parental Control Locks earlier), select **Forgot PIN**.
2. Enter the following Change PIN Authorization Number: **2229566**
3. Select **Done**.
4. Follow the instructions onscreen to create a new PIN.

Changing Settings

You can use the Settings menu to change Recorder settings. Following is a list of the settings you can change.

Recorder

Change Recorder default settings, including:

- Change the default setting for how long a recording should be kept. Set Keep from the default of **Until Space Needed** to **Until I Delete**.
- Set the default quality of recordings. Change **Quality** to **Good**, **Better**, or **Best**.

Note **Best** quality requires the most storage space for a recording, followed by **Better** quality and then **Good** quality (which uses the least amount of storage space).

Guide Setup

Guide setup settings include:

- If you need to change your TV signal or TV service provider, how you enter channels by using the remote and other TV settings select **Set up TV Signal and Guide** to launch the **Set up TV Signal and Guide** portion of the Setup Wizard.
- To add or remove channels from the Program Guide, select **Edit Channels**. Any channel with a check next to it is displayed in the Guide. To remove a channel from the Guide or add a channel previously removed, select the channel and press **OK**. You can scroll through the list by using the arrow keys or **CH/PG** on the remote.
- To download the latest Program Guide listings, check the status of the current Guide download, or see the last time the Guide was downloaded, select **Get Latest Guide Listings**. In addition to the Program Guide download, any new software update for the Recorder will be downloaded at the same time.

DVD Settings

Set the default language options for DVD playback.

Note You cannot access **DVD Settings** during DVD playback.

- **DVD Language**
  - Set the default DVD subtitle language.
  - Change the language of the default audio track (such as English, French, or Spanish).
  - Set the default language of the DVD menu.
- **Digital Audio Output**
  - If the Recorder is connected to a home entertainment center amplifier/receiver or a TV that supports Dolby© Digital playback (5.1 channel audio through a Dolby Digital decoder), select **Bitstream** under **Dolby Digital**. Otherwise, select **PCM**.

Note Dolby© Digital playback—5.1 audio—is only available if:

- The DVD that you are watching supports 5.1 channel audio.
- Your home entertainment center amplifier/receiver supports 5.1 audio playback.
- You have selected **Bitstream** under **Dolby Digital**.
- If the Recorder is connected to a home entertainment center amplifier/receiver or a TV that supports DTS playback, select **Bitstream** under **DTS**. Otherwise, select **Off**.

Note When **Bitstream** is selected, the Recorder sound effects are disabled. Analog audio output (provided through red and white audio cables connected to **AUDIO OUT** on the back of the Recorder) is also disabled.

- **Angle Indicator**
  - For DVDs with multiple camera angles, select **Angle Indicator is ON** to display the angle indicator when multiple angles are available.
- **TV aspect ratio**
  - Set the TV aspect ratio to **4:3 letterbox**, **16:9 widescreen**, or **4:3 pan and scan**. These settings depend on your TV; for more information, see your TV documentation.

Parental Control

Create a parental control PIN, assign the lock code to different types of shows or change the parental lock code PIN. For more information, see **Set the Parental Control Policy**.

Phone and Network Setup

Select **Phone and Network Setup** to update dial-up and networking settings. You can switch from dial-up to broadband (or vice versa) or change wired (Ethernet), wireless, or dial-up connection settings.

Run Setup Again

If you do not use the Setup Wizard for 30 minutes (such as leaving your TV before completing setup), the wizard will stop running and display the current TV show. To complete the Setup, select **Run Setup Again**

System Information

The System Information menu includes:

- The Recorder information such as the Service ID and software version.
- Your current Microsoft® Program Guide subscription information.
- **Set Clock** where you can change the clock settings.

Send to PC

Set the defaults for copying recorded shows to other PCs on your home network. You can provide the following default information:

- Network path to the destination folder on the computer (in the format \\PCname\foldername).
- Your network account user name.
- Your network account password.

Note You can only copy recordings to one computer at a time. To copy to another computer, change the path and network account information for the second computer, and then start the process over again.

Audio Settings

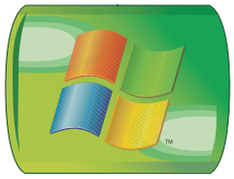
Select the default audio format: **Mono**, **Stereo**, or the **Secondary Audio (SAP)**.

Note A Secondary Audio Program is an audio broadcast or track in a language other than English. The secondary audio may be Spanish, French, Japanese or another language.

If the SAP is selected and you record a show, the show is recorded in the SAP language, not stereo audio.

Some TV shows include an SAP that is inaudible. If you select SAP and do not hear audio, switch to **Stereo**.

Windows® Media Connect: Access Pictures and Music Stored on a Computer



Windows Media Connect provides digital media such as music files (.WMA or .MP3) and pictures (JPEG) from a computer on your home network to the Recorder. The computer must have Windows Media Connect installed in order for the computer to share its files to the Recorder.

On the computer containing the media, the Recorder must be registered as a device that can access the files.

Before You Use Windows Media Connect

Before the Recorder can connect to a computer using Windows Media Connect, make sure:

- Depending on the version of Windows Media Connect you have installed, Microsoft® .NET framework 1.1 may be required. For more information, visit the Microsoft website (www.microsoft.com).
- Any updates for Windows Media Connect are installed. For more information, visit the Microsoft website (www.microsoft.com).
- The IP address for your home network must be within the following ranges:
  10.0.0.0–10.255.255.255
  169.254.0.0–169.254.255.255
  172.16.0.0–172.31.255.255
  192.168.0.0–192.168.255.255

For more information about the IP address for your home network, consult the network documentation.

Connect to a Computer Running Windows Media Connect

1. Make sure the computer with Windows Media Connect is turned on.
2. After the Recorder is connected to the home network, Windows Media Connect will display a message on the computer that a new device has been connected to the network.
3. Follow the instructions onscreen to add the Recorder (LRM-519) to the list of devices.
4. Select the folders you want to access from the Recorder.

After the Recorder is added, the computer will appear in **My Pictures** and **My Music**.

Notes

- Computers that are part of a network domain (such as corporate networks) instead of a workgroup are restricted to the domain security policies. If the computer with Windows Media Connect is part of a domain, there may be limitations on sharing files. For more information, consult your network administrator.
- The Recorder can connect to a network by using broadband and download Guide listings by using a dial-up connection, at the same time. For more information, see **1. Set up Connection** in **Set up the Recorder.**

Getting Around the Recorder Menus

The Recorder remote control (referred to in this User's Guide as the remote or the Recorder remote) is used to change channels while watching live TV and pause, record, rewind, and fast forward through live TV; control playback of recorded TV programs and DVDs; view pictures; listen to music; navigate within the Recorder menus; and select menu buttons such as **Recorded TV**, **Next**, **Back**, and **Cancel**.

The Start menu is where you access the Recorder functions. To display the Start menu, press on the remote.

(START)

To display the Start menu, press . From the Start menu, select Recorder features such as Guide, Create DVD, or My Music. Pressing displays the on-screen menu or dismisses the menu if it is displayed.

Move Around the Menus

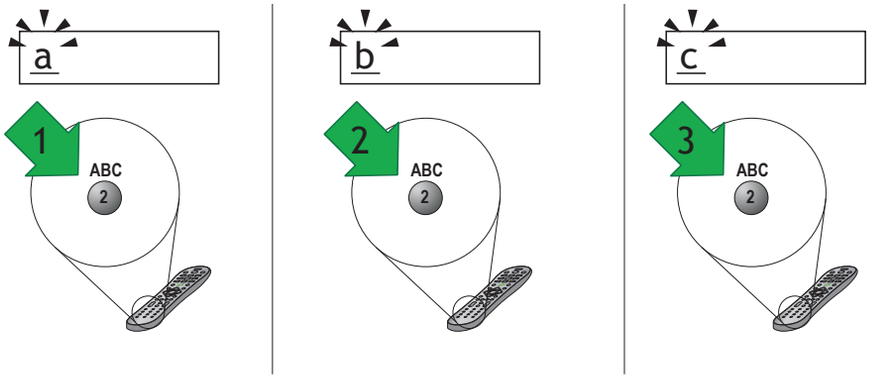
When a menu or other page is displayed, use the left, right, up, and down arrows on the remote to move between on-screen buttons and TV program listings or other on-screen elements. The currently highlighted button is a green bar .

Select a Menu Item

To select the button or item, press **OK**.

Enter Text by Using the Remote

To enter text on-screen, use the numeric keypad on the remote control by pressing the number repeatedly for the desired letter. To enter the letter "b" press the number 2 twice; to enter word "bl" (for example, shows beginning with "blue"), press 2 twice for "b", and then press number 5 three times for the letter "l".



When entering a word where the letters are on the same key such as searching for shows that begin with "de" (both on the number 3 key), enter the first letter, press the right arrow on the remote (or wait a few seconds and the cursor will move to the right), and then enter the next letter.

If you make a mistake, press CLEAR on the remote to delete the previous character.

Viewing Pay-Per-View or Video-On-Demand Programs

Important Some cable and satellite service providers offer pay-per-view or video-on-demand programming. The Recorder remote cannot be used to purchase these programs. To order this programming, use the remote control for your digital cable or satellite set-top box. For more information, contact your cable or satellite service provider.

Using the Recorder

With the Recorder, you can watch TV shows, record shows, pause live TV, replay live TV, and copy shows to a DVD. Many of these features can be used at the same time. For example:

- You can watch a recorded show while recording a different show and copying a recording to a DVD.
- You can watch a TV show while recording it and copying a recording to a DVD.
- You can watch a DVD while recording a show.

This section describes all of the features of the Recorder.

Watching TV

Before you can watch TV by using the Recorder, make sure:

- The Recorder is set up correctly and you have completed the Setup Wizard.

Once the Setup Wizard successfully completes, you can watch live TV.

Change Channels on the TV

Press CH/PG to change the TV channels. You can also enter the channel number by using the numeric keypad on the remote and the channel will change after a few seconds.

Switch between the Current Channel and the Previous Channel

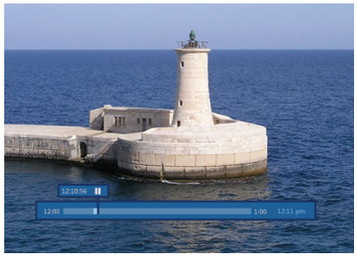
When watching a live TV show (and not in any menu or on-screen page), you can jump between the current TV channel you are watching and the previous channel by pressing OK. To switch back, press OK.

Note If you were previously watching a recorded show or a DVD, pressing OK will return you to the recorded show or the DVD.

Display Information about the Current TV Show

To see the name of the TV show you are watching, the current TV channel, and the current time, press INFO. To see detailed information about the TV show, press INFO twice.

Controlling Live TV



When you begin watching live TV, you can pause, instant replay the last seven seconds of live TV, and fast forward through live TV. The Recorder temporarily records the previous 90 minutes of live TV. The Recorder even tracks when you switch channels during the previous 90 minutes.

When you pause, replay, rewind, skip over or fast forward live TV, a status bar appears on screen. The status bar is a timeline that shows when the start of the buffer and the end of the buffer (a light blue bar within the timeline). Above the timeline is the current point within the buffer itself. In addition, the status bar shows if the show is paused and at what point time it is paused, if you are rewinding, replaying, skipping or fast forwarding through the 90 minute buffer.

Pause Live TV

While watching live TV, you can pause the show you are watching by pressing PAUSE ⏸ on the remote.

Continue Playback of a Paused TV Show

To continue playback of a paused TV show, press PLAY ▶ or PAUSE ⏸.

Replay Live TV

If you want to see a the previous few seconds of the current TV show, press REPLAY ⏮. The TV show jumps back seven seconds and plays the show from that point. You can press REPLAY ⏮ repeatedly.

Rewind Live TV

To replay more than seven seconds, press REW ◀◀ on the remote. While the show is rewinding, you can press REW a second time or a third time to speed up the rewinding. Pressing REW a fourth time returns to the standard rewinding speed.

Fast Forward

If a live show is rewound (or replayed), you can forward ahead by pressing FWD ▶▶. Press FWD a second or third time to speed up the fast forwarding. Pressing FWD a fourth time returns to the standard fast forwarding speed.

Skip Ahead

When a TV show is rewound you can skip forward 30 seconds at a time by pressing SKIP ⏭. For example, press SKIP to quickly forward through a commercial.

Return to Live TV

If you have paused, rewound, or replayed live TV or you are in a Recorder menu, the Program Guide, viewing pictures or listening to music, press LIVE TV to return to the current TV show.

Turn the TV Off or On

Press TV POWER to turn the TV off or on.

Note To turn the TV off or on by pressing TV POWER, you must program the Recorder remote to control the TV. For more information, see **Program the Remote to Control the TV**.

Change the TV Volume

To change the TV volume, press VOL.

Note To change the TV volume by pressing VOL, you must program the Recorder remote to control the TV. For more information, see **Program the Remote to Control the TV**.

Mute the TV

To turn the TV sound off (mute), press MUTE.

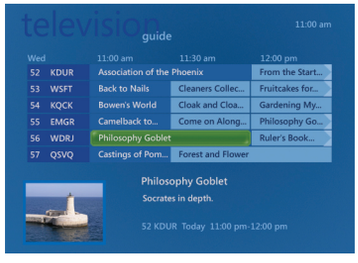
Note To mute the TV off or on by pressing MUTE, you must program the Recorder remote to control the TV. For more information, see **Program the Remote to Control the TV**.

Change the TV Input Source

If you have another device such as a video cassette recorder connected to the TV, press TV INPUT to switch between the Recorder and the other device.

Note To change the TV input source by pressing TV INPUT, you must program the Recorder remote to control the TV. For more information, see **Program the Remote to Control the TV**.

The Program Guide



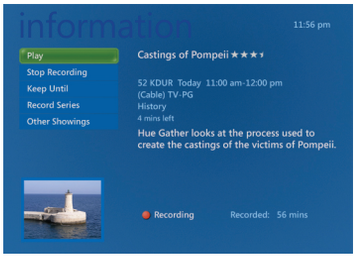
The Program Guide provides listings of the shows currently available for viewing. From within the Guide, you can change channels to watch a show, view information about a show, record a show, and locate additional showings.

The Recorder has two guides–the mini-Guide (displays a few upcoming shows) and the Guide (the full version). To display one or the other guide:

- **Mini-Guide** Press GUIDE on the remote once to display the mini-Guide. The mini-Guide displays a small listing channels with current and upcoming shows on the bottom of the screen.
- **Full Guide** Press GUIDE twice on the remote control or press START on the remote, and then select **Guide**.

Turn off the Guide

To turn off the Guide, press GUIDE or CLEAR on the remote.

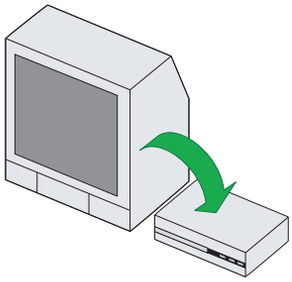


Navigating within the Program Guide

To:	Press:
Scroll through the show list	Up or down arrows
Scroll one page up or down in the show list	CH/PG +/-
Scroll to the right or left one show at a time	Left or right arrows
Scroll three hours ahead	FWD
Scroll three hours back	REW
Advance the listings twelve hours	SKIP
Scroll the listings back twelve hours (to the current time)	REPLAY
View more information about a show	INFO or OK (for future shows)
Turn off the Guide	BACK or GUIDE

To record a show by using the Guide, see **Record a Show Using the Guide**.

Recorded TV

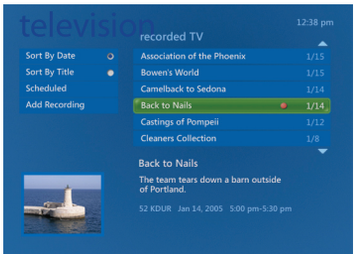


Use Recorded TV to record shows for future viewing. When a show is recorded, it is stored to the hard disk in the Recorder.

If you have attached a USB disk drive, you can increase the amount of time available for recordings.

Note The amount of remaining time for recordings is an approximation, not an exact amount because of factors including quality of the recording and how long recordings are to be kept.

Record the Current Show



- To record a show you are currently watching, press REC on the remote. Press REC again to stop the recording.

If you have subscribed to the Microsoft® Program Guide service, you can record a TV series by pressing REC twice while displaying the mini-Guide or the Guide.

- You can also press INFO on the remote, and then select **Record**.

To set recording options for the current show, press INFO twice on the remote. These options include **Record**, **Record Series**, **Advanced Record**, and **Other Showings**.

Note The recording features (except for Manual Record) require a subscription to the Microsoft® Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A.

Record a Show Using the Guide

- To record a show in the Guide, display the mini-Guide or the Guide, select the show, and then press REC on the remote.
- To record the current and future episodes of a series, press REC twice.

Record Using Search

Note Program search does not contain listings unless you have a subscription to the Microsoft® Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A.

You can find shows to record by using the **Search** feature. The Recorder can search for shows using the following methods.

- **Title search** The Recorder searches for any show title beginning with each character you enter. For example, if you enter "b" a list is displayed of show titles beginning with the letter B; if you enter "be" the list displays those titles beginning with "be".
- **Category search** The Recorder displays a list of different types of shows, such as Comedy or Drama.
- **Keyword search** Use this option to display a list of shows by a certain subject (enter "seattle" to see shows about Seattle), actor name, or a specific word in a show description.

To record a show using Search

1. From the Start menu, select **Search**.
2. Select the type of search: **Title**, **Category**, or **Keyword**.
3. Do one of the following:
   - **For a Title search** Use the numeric keypad on the remote to enter the first few characters of the show title.
   - **For a Category search** Select the type of show you want to watch.
   - **For a Keyword search** Use the numeric keypad on the remote to enter the first few characters of a subject title, actor name, or other keyword. Select **Search** to locate shows matching the keywords.
4. Select the show you want to record.
5. Press INFO, and then select **Record**.

Record a TV Series

Note To record a TV series, you must subscribe to the Microsoft® Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A.

1. Display the mini-Guide or the Guide.
2. Select an episode of the series.
3. Press REC on the remote twice.

or

Press INFO, and then select **Record Series**.

Manually Record a Show

Note If you have not subscribed to the Microsoft Program Guide service, you must manually record shows. For more information about subscribing and its advantages, see **The Microsoft® Program Guide** in Appendix A.

1. On the **Start** menu, select **Recorded TV**.
2. Select **Add Recording**.
3. Select **Record by Channel and Time**.
4. Enter the channel number, date, time, and other options.
5. Select **Record**.

Stop the Current Recording

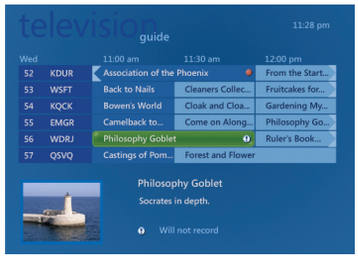
- Press STOP on the remote.
- If you are watching the show that is recording and no menus are displayed, press REC on the remote.
- Press INFO, and then select Stop Recording.

Cancel Future Recordings

To cancel an upcoming recording:

- Display the mini-Guide or the Guide, and then select the show and press REC until the record icon ● is no longer displayed.
- Display the mini-Guide or the Guide, select the show to be recorded, press INFO on the remote, and then select **Do Not Record** or **Do Not Record Series** if available.

Recording Conflicts



If you schedule a recording when another show is scheduled to be recorded, you will have a recording conflict. When a recording conflict occurs, you must decide which show to be recorded.

If there is a recording conflict, a message will appear warning you of the conflict. You will also see ! next to the show title in the Guide. If an episode of a series will not record, you will see !.

Change Recording Options

1. Display the mini-Guide or the Guide.
2. Select the show to be recorded.
3. Press OK or INFO to display information about the show, including recording settings.
4. Select **Record Settings**. If a series, you will be asked which should be changed: settings for this episode only or settings for entire series.
5. Set the **Keep**, **Quality**, **Start** (On Time, 1 minute before, 2 minutes before, 15, 30, 1 hour) and **Stop** (On Time, 1 minute before, 2 minutes before, 15, 30, 1 hour) options.

View Information about a Show That is Recording

- While a show is recording, press INFO on the remote twice.

Copy a Recording to a DVD or a Computer

After a show is recorded, you can copy the recording to a DVD or a computer. Copying a recording allows you to save the recording for future viewing and free up space on the Recorder for future recordings.

To copy a recording to DVD, see **Create a DVD**.

To copy a recording to a computer, see **Send to PC**.

Note The amount of remaining time for the copy process is an approximation, not an exact amount.

Record-protected program content

The provider of a show can restrict the show or some of the program content from recording. When the Recorder encounters this restriction, it will not record the protected content.

- If an entire show is restricted from recording, the Recorder will not record the show.
- If some program content is restricted, the Recorder will only record the show until it reaches the first restricted segment.

Shows can also be copy-protected, but recordable. This means you can record the show but you are restricted when making copies of the recording. For information about copy-protected shows, see Copying Copy-protected Shows.

View a Recorded Show

1. On the Start menu, select **Recorded TV**.
2. From the list of recordings, select the recorded show you want to watch.

Note To change the list of recordings, select **Sort by Date** or **Sort by Title**.

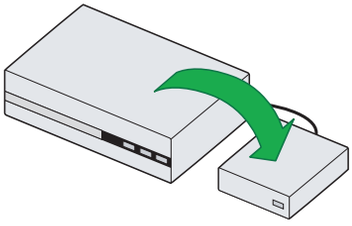
View Scheduled Recordings

1. On the **Start** menu, select **Recorded TV**.
2. Select **Scheduled**.

View Info about a Recorded Show

In Recorded TV, select the recorded show and press OK. You can view information about a show, play it, delete it, change how long to keep the show, and find other airings of the show.

Add Additional Storage



You can add additional storage to the Recorder by attaching a USB drive.

When you attach a USB drive for additional storage, the Recorder moves recordings from the hard drive in the Recorder to the USB drive as needed. This allows you to keep recordings for longer periods of time. The number of additional recordings depends upon how much storage the USB drive has available.

Notes

- For a list of recommended USB, visit the technical support website (www.LGusa.com/DigitalMediaRecorders).
- To use a USB drive for additional storage:
  - Make sure the USB drive is USB 2.0 compliant.
  - The USB drive must use the FAT32 file system. For more information about the FAT32 file system, see the Windows® XP Help and Support Center.
  - The USB drive must be 10GB (gigabytes) or larger.
- The Recorder supports USB drives with one or more drive partitions. For more information, refer to your USB drive documentation.
- If you connect the USB drive while viewing pictures (**My Pictures**) or listening to music (**My Music**), the Recorder will try to locate pictures or music files on the USB drive instead of using the drive for additional storage. To attach the USB drive for storage, press Start to exit **My Pictures** or **My Music** before you connect the USB drive.

Connect a USB drive for storage

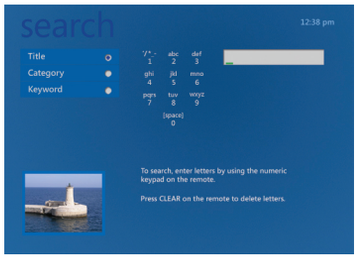
1. Make sure the Recorder is turned on.
2. If you are viewing pictures (**My Pictures**) or listening to music (**My Music**), press Start on the remote to exit **My Pictures** or **My Music** and display the **Start** menu.
3. Connect the USB drive to one of the USB ports on the Recorder.
4. Follow the on-screen messages to use the USB device for additional storage.

Remove a USB drive

Important When you disconnect a USB drive, make sure the Recorder is powered off.

1. To power off the Recorder, press and hold Power on the front panel of the Recorder or press and hold POWER on the Recorder remote. Press and hold the button until the front panel of the Recorder turns off (approximately five seconds).
2. Disconnect the USB drive.
3. Turn the Recorder on by pressing Power on the front panel of the Recorder or POWER on the Recorder remote.

Search



Search finds shows based upon different conditions you specify.

Note Search does not contain listings unless you have a subscription to the Microsoft® Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A.

- **Title search** the Recorder searches for any show title beginning with each character you enter. For example, if you enter "b" a list is displayed of show titles beginning with the letter B; if you enter "be" the list displays those titles beginning with "be".
- **Category search** the Recorder displays a list of different types of shows, such as Comedy or Drama.
- **Keyword search** Use this option to display a list of shows by a certain subject (enter "seattle" to view shows about Seattle), actor name, or a specific word in a show description.

1. From the **Start** menu, select **Search**.
2. Select the type of search: **Title**, **Category**, or **Keyword**.
3. Do one of the following:
   - **For a Title search** Use the numeric keypad on the remote to enter the first few characters of the show title.
   - **For a Category search** Select the type of show you want to watch.
   - **For a Keyword search** Use the numeric keypad on the remote to enter the first few characters of a subject title, actor name, or other keyword. Select **Search** to find shows that meet your criteria.
4. Select the show you want to watch.

Play a DVD/CD

Viewing a DVD

The Recorder includes a DVD player and recorder. When you insert a DVD into the Recorder the DVD will play automatically (unless it contains mixed content; see the following note). To view a DVD, use the following instructions.

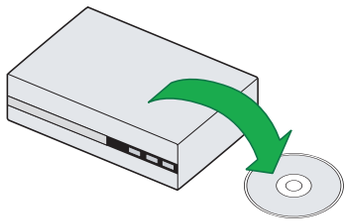
1. Press Open/Close on the Recorder.
2. Load a DVD into the tray.
3. Press Open/Close to close the tray.

Note If the DVD contains mixed content–both TV shows and music, music and photos, or TV shows and photos–then the DVD will not play automatically. To view different content on the DVD, select **My Music** or **My Pictures** on the **Start** menu.

DVD Controls

On the Recorder remote, use the following buttons on the remote to control DVD playback.

To	Press
Start DVD playback	PLAY
Pause DVD playback	PAUSE
Stop the DVD	STOP
Fast forward through the DVD	FWD
Rewind through the DVD	REW
Advance to the next chapter/track	SKIP
Move back to the beginning of the current chapter/track or press twice to move back to the beginning of the preceding chapter/track	REPLAY
Display the top menu of the DVD or return to the previous menu (when navigating the DVD menus)	DVD MENU
Display the top menu of the DVD	TOP MENU
Change DVD audio options	AUDIO
Turn on or turn off DVD subtitles or scroll through available subtitle languages	SUBTITLE
View alternate scene angles (if available; a camera icon appears when a chapter has alternate angles)	ANGLE



Create a DVD

To store a recorded show for future viewing, you can copy the recording to a DVD. To create DVDs of your recorded shows, both single- and double-layer DVDs may be used.

Note When the Recorder is creating a DVD, the **Send to PC** functionality is not available.

Supported DVD formats	Number of shows
DVD +/- R or DVD +/- RW	Up to 7 shows or available recording space, whichever comes first.
DVD+R double layer	Up to 16 shows or available recording space, whichever comes first

Copying Copy-protected Shows

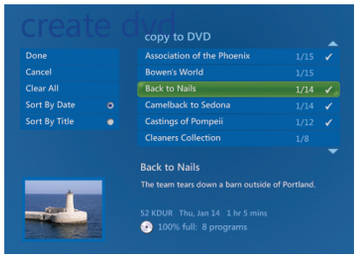
The provider of a show can restrict content from being copied. When the Recorder encounters a copy restriction within a recording of a show, the Recorder will not allow the protected content to be copied to DVDs, computers, or USB devices.

When you select recordings to copy to a DVD, recordings that cannot be copied are not available.

Copy of Commercial/Retail Copyrighted DVDs

The Recorder cannot copy or record commercial or retail copyrighted DVDs (such as, motion picture DVDs or retail DVDs of TV shows) to the Recorder disk drive, a USB device, or a computer.

Copy a Recording to a DVD



1. Insert a blank DVD into the disc tray.
2. On the **Start** menu, select **Create DVD**.
3. When the list of recorded shows is displayed, select the shows to copy. You can view the list of recorded shows by selecting **Sort by Date** or **Sort by Title**.

As you select shows to copy, the percentage of used space is shown at the bottom of the screen.

4. After you have selected the recordings to copy, select **Done**.
5. Change the title of the DVD menu or the names of the shows (tracks), if desired.
6. To begin the copy, select **Create DVD**.

Notes

- If a show is still recording, you cannot copy the recording until the recording is complete.
- To clear all of the recordings you have selected to copy, select **Clear All**.
- If a show is too large to fit on one DVD, you can record the show onto multiple DVDs. For more information, see **Copy a Large Recording to More than One DVD**.

Copy a Large Recording to More Than One DVD

When copying a recorded show to a DVD, the recording may be too large to fit on one DVD. When the recording is too large to fit on one DVD, you can copy different portions of the recording to multiple DVDs.

Note You can copy one portion of a recording now and remaining portions of the recording at a later time. The Recorder keeps track of the remaining portions until the entire recording has been copied.

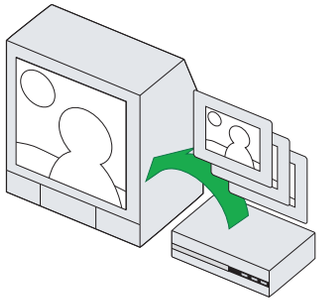
Copy the First Portion of a Recording onto a DVD

1. In **Create DVD**, select the recorded TV show you want to copy to DVD.
2. If the recording is too large to fit on the current DVD, a message displays telling you how much will fit on the current DVD. You can copy the remaining portion of the show to one or more DVDs (as needed).
3. To copy this portion of the show, select **OK**.
4. To cancel the copy, select **Cancel**.

Copy the Next Portion of a Recording onto a DVD

1. Insert the next DVD you want to copy to.
2. In the list of recorded shows, select the recorded show to continue copying.
3. If the remaining portion of the show will fit on the DVD, you may select additional shows to copy to the DVD (if there is enough room). Select **Create DVD**.
4. A message displays telling you how much of the show has been copied and how much will be copied now. If the remaining portion of the recording will fit, all of the portion will be copied to the DVD (and anything else you selected). If only a portion of the recording will be copied to the DVD, the Recorder will display how much is remaining to be copied.
5. To begin the copy, select **OK**.
6. To cancel the copy and copy the same recording from the beginning, select **Restart**.

My Pictures



The Recorder can display digital pictures that are stored on CDs, DVDs, USB drives, and network devices connected with Windows® Media Connect.

You can display a single image or all the photos stored within a folder or device. When the Recorder displays the photos the Recorder can also play music.

Note To view digital photos stored on computers in your home, make sure the computer is using Windows Media Connect. The Recorder must be registered as a Windows Media Connect client. For more information, see **Windows Media Connect: Access Pictures and Music Stored on a Computer**.

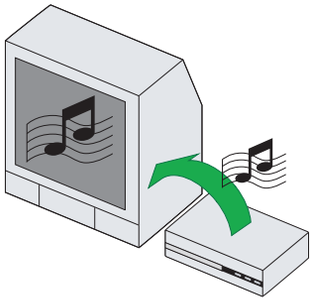
View Pictures with the Recorder

Note The Recorder does not support multi-session CDs. Multi-session CDs contain data recorded onto the disc at different times, not all at once.

To display pictures on your TV:

1. On the **Start** menu, select **My Pictures**. The Recorder searches for available pictures.
   - If a DVD/CD is inserted into the disc tray, the Recorder will search for pictures on the disc.
   - If a USB device such as a USB drive or a USB key is connected to the Recorder, the Recorder will search for pictures on the device.
   - If the Recorder is connected to another computer by using Windows Media Connect, the Recorder will search folders on the computer.
2. In the list of folders, select the folder of pictures you want to view.
3. To display all pictures in the folder, select **Play Slide Show**. To display a single picture, select the picture and press OK.

My Music



The Recorder is a great way to play music on your TV. If you connect the Recorder to your home entertainment center amplifier, the music will play through the amplifier, providing a rich music experience.

Find Music to Play

When you select My Music on the Start menu, the Recorder searches for collections of music stored on a CD or DVD in the disc tray, on an attached USB device, or on computers connected to the home network that use Windows Media Connect. For more information, see **Windows® Media Connect: Access Pictures and Music Stored on a Computer.**

Note The Recorder does not support multi-session CDs. Multi-session CDs contain data recorded onto the disc at different times, not all at once.

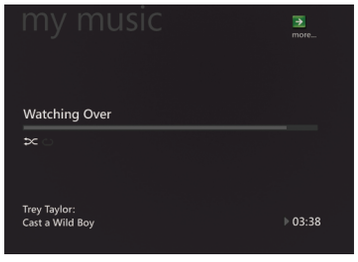
When music is displayed and the music contains information including artist, album title, and song titles, you can change the order of the display:

- **Albums** View the collection by album title.
- **All Music** View the collection by song title.
- **Artist** View the collection by artist name.
- **Genre** View the collection by category or type of songs (for example: Oldies or Adult Contemporary).
- **Playlists** View playlists of songs created with Windows® Media Player on a computer.

Listen to Music

Note To listen to digital music stored on computers in your home, make sure the computer is using Windows Media Connect. The Recorder must be registered as a Windows Media Connect client. For more information, see **Windows Media Connect: Access Pictures and Music Stored on a Computer**.

Play Music on a CD or DVD



1. If the music is stored on a CD or DVD, insert the disc into the tray.
2. When the CD or DVD is inserted, the Recorder will play automatically. If the CD or DVD does not play automatically, select **My Music** on the **Start** menu.

Note If the CD or DVD contains mixed content–both TV shows and music, music and photos, or TV shows and photos–then the CD/DVD will not play automatically. To view different content on the DVD, select **My Music** or **My Pictures** on the **Start** menu.

3. To select a different song or view the music on the CD or DVD, press Start on the remote, and then select **My Music**. Select the CD or DVD.

Note If the CD or DVD is a disc you created, artist and track title information may not be available. Some software that creates CDs/DVDs of music does not record this information. For more information about adding artist and track title data to a CD or DVD you create, see the documentation for the software used to create the disc.

Use PLAY, PAUSE, SKIP, and REPLAY on the remote to control playback. For more information, see the **Remote Control Reference**.

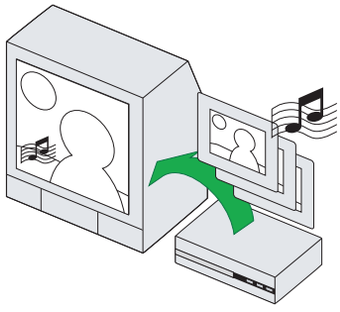
Play Music on a USB Device or Another Computer

1. On the **Start** menu, select **My Music**.
2. Select the USB device or a computer. (If a CD or DVD is inserted in the Recorder, it will also appear. You may select that as well.)
3. To play all the tracks in order, select Play All.
   To play a single track, select the track.

Shuffle and Repeat Music

To play the songs (tracks) in a random order, you can select Shuffle. To repeat the same track (if a single song is selected) or all the tracks (if Play All is selected), select Repeat.

1. On the **Start** menu, select **My Music**.
2. With a song playing, select **Options**.
3. Select the options you want.

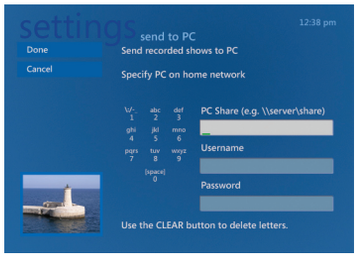


Add Music to a Slide Show

The Recorder can play music while a slide show is running. Similar to a soundtrack, you can assign any music to a slide show.

1. On the Start menu, select **My Music**.
2. Select a collection of music to play.
3. In the list of available songs, do one of the following:
   - To use one song, select the song.
   - To use the whole collection, select **Play All**.
4. Select **More**...
5. Select **Choose Slide Show**.
6. Select the pictures you want for the slide show, and then select **Play Slide Show**.

Send to PC



A recorded show that is not copy-protected can be copied from the Recorder to a shared folder on a computer connected to a network.

Before you send a recording to a computer, you must know if the computer is running

- Windows® XP Home Edition
- Windows® XP Professional

Note When the Recorder is sending a recording to a computer, the **Create DVD** functionality is not available.

If your computer is connected to a network domain

Network domains can have policies to control computer (or device) access to the network. Since a policy can restrict access to a domain, please contact your network administrator for assistance.

Before Using Send to PC

If you need assistance in creating a network user account and password or creating a shared folder, go to the computer you are going to copy recordings to. On the **Start** menu, search for Help topics listed below in **Help and Support**.

Your Network User Account and Password

Follow the instructions below to make sure you have a user account or if you need to create one.

Windows XP Home Edition

Make sure you have a network user account for your network. To determine if you have a network user account or if you need to create an account, select **Start > Control Panel > User Accounts** on the computer.

1. If you do not have a network user account, select **User Accounts** and then select **Create a new account**.
2. Enter a user account name and a password. A password is not required; you can leave this option blank.

Note The Recorder does not support spaces in network user account names. The Recorder does support the underscore character (_) in network user account names.

Windows XP Professional

Make sure you have a network user account for your network. To determine if you have a network user account or if you need to create an account, select **Start > Control Panel > User Accounts** on the computer.

If you do not have a network user account:

- Create a new user account. For more information, search for the topic **Create a new user account** in **Help and Support** on the Windows® XP **Start** menu.

Note The Recorder does not support spaces in network user account names. The Recorder does support the underscore character (_) in network user account names.

- Make sure the network account is not disabled and you do not have to change the network password the next time you log on. To check this:

1. On the **Start** menu, click **Control Panel**.
2. Select **User Accounts** and then select **User Accounts** again.
3. Click the **Advanced** tab and then click the **Advanced** button.
4. Double-click the **Users** folder in the right pane and then right-click the user account name and select **Properties**.
5. Make sure the **User must change password at next logon** and **Account is disabled** are not checked.

- Keep track of your network password.

The Shared Folder And The Location Of The Folder

Make sure you have a shared folder on the computer that is ready to receive recordings. For more information, search for **Using shared folders** in **Help and Support** on the computer. For the process to share a folder, search for **To share a folder or drive** in **Help and Support**. Make sure to use the instructions for **Using Windows Explorer**.

Windows XP Home Edition

- Make sure the folder is stored at the top (root) level of a hard drive. For example, if the shared folder is named **CopiedShows** on the C: drive, make sure it is at the root level of the C: drive: **C:\CopiedShows**.
- You must know the network name of your computer. This is usually the name of the computer. For example, the name of your home computer may be **HomePC**.
- The location of the shared folder on the network is the path to the folder in the form \\ComputerName\FolderName. For this example, the path to the shared folder is **\\HomePC\CopiedShows**.

Windows XP Professional

- Make sure the folder is stored at the top (root) level of a hard drive. For example, if the shared folder is named **CopiedShows** on the C: drive, make sure it is at the root level of the C: drive: **C:\CopiedShows**.
- You have permission to change and read the folder. You can also have full privileges for the folder. For more information, search for the topic **To set, view, change, or remove file and folder permissions** in **Help and Support** on the Windows XP **Start** menu.

- You must know the network name of your computer. This is usually the name of the computer. For example, the name of your home computer may be **HomePC**.
- The location of the shared folder on the network is the path to the folder in the form \\ComputerName\FolderName. For this example, the path to the shared folder is **\\HomePC\CopiedShows**.

Note When connecting the Recorder to a computer, there is no need to disable your firewall or network security.

Use Send to PC to Copy a Recording to a Computer

1. On the **Start** menu, select **Send to PC**.
2. Using the numeric keypad on the remote, enter the path (in the format: \\PCname\foldername) to a shared folder on the computer.
   Note Make sure you have write permissions for the shared folder.
3. Enter your network account user name.
4. Enter your network account password (if the account has a password).
5. Select **Next**.
6. Select the recordings you want to copy.
7. Select **Send to PC**.

Note Once you enter the network path and account information (step 2 through step 5), the Recorder retains the settings. If you want to copy recordings to another computer, select **Start > Settings > Send to PC** and change the path to the shared folder, the network user account and password as necessary.

Stop the Copy Process

- To stop the copy process, select **Stop** in the **Copy Process** message.

Note You can resume copying the recording to the computer at a later time. When you continue the copy process, the Recorder synchronizes the copy and only copies the remainder of the recording.

Important Before you can copy the remainder of a recording to the computer, you must be logged on to the network by using the **Send to PC** page. You may need to change your logon information (network user account name and password) on the **Start > Settings > Send to PC** page on the Recorder.If another person logs on to the network to copy the remainder, the Recorder will not properly synchronize the remainder of the recording.

Notes

- Recordings of shows can be restricted from copying. For more information, see **Copying Copy-protected Shows**.
- The Recorder cannot copy commercial or retail copy-righted DVDs. For more information, see **Copy of Commercial/Retail Copyrighted DVDs**.
- The Recorder can connect to a network by using broadband and download Guide listings by using a dial-up connection, at the same time. For more information, see **1. Set up Connection** in **Set up the Recorder.**

Appendix A: The Microsoft® Program Guide

The Microsoft® Program Guide service enables all of the features of the Recorder. With a subscription, the following features are available to you:

- The Program Guide, including up to two weeks of TV listings
- Search for upcoming shows
- Record shows by selecting the show in the Guide or Mini-Guide and pressing REC on the remote.
- Record TV series

To subscribe to the service or for more information, visit www.microsoftprogramguide.com or contact LG Customer Support at 1-800-984-6306.

Note If the Program Guide does not download after you subscribe to the Microsoft Program Guide service, select **Start > Settings > Guide Settings > Get Latest Guide Listings > Download Now**. When you select **Get Latest Guide Listings**, you can also check the status of the download.

Appendix B: Troubleshooting

Issue	Solution
The Recorder Setup Wizard disappeared.	The Setup Wizard automatically dismisses from the screen after 30 minutes of inactivity. Depending on your TV service, you may see live TV or a snowy picture. To resume Setup, select **Start > Settings > Run Setup Again**.
The Program Guide is blank.	• To receive the Program Guide, you must subscribe to the Microsoft® Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A. • The Program Guide could still be downloading. The download may take 20 minutes or longer depending on your network connection (broadband vs. dial-up) and network traffic. You can check the status of the download by selecting **Start > Settings > Guide Settings > Get Latest Guide Listings**. • The Recorder may be downloading a software update and the Program Guide. Over a dial-up connection, this may take 90 minutes or longer. For more information, see **Downloading the Program Guide and Software Updates**. • The Recorder could not download the Guide because of network issues. For more information, see **The Recorder cannot connect to the Microsoft Program Guide service or you receive a Service Connection Error**.
Can only record a TV show by using REC on the remote or by manually scheduling a recording.	To record shows by using the Guide or Mini-Guide, you must subscribe to the Microsoft Program Guide service. For more information, see **The Microsoft Program Guide** in Appendix A.
The Recorder cannot connect to the Microsoft Program Guide service or you receive a Service Connection Error.	• Your network may be having problems. Make sure your home network is working properly and that your broadband or dial-up service is working: If using a wired broadband connection: • Make sure the Ethernet cable is connected to the ETHERNET port on the back of the Recorder and is properly connected to your home network. • Make sure the Recorder is receiving an IP address. On the **Start** menu, select **Settings > System Information** and confirm there is an IP address and that the IP address is correct. • Make sure your network settings are correct. On the **Start** menu, select **Settings > Phone and Network Setup**. • Make sure your broadband serivce is working. If other devices such as a computer in your home also connect to your broadband service, check to make sure you have service from those devices. If not, contact your broadband service provider for more information.

continued >>>

If using wireless broadband connection:

- Make sure the Recorder is receiving an IP address. On the **Start** menu, select **Settings > System Information** and confirm there is an IP address and that the IP address is correct.
- Make sure your network settings are correct. On the **Start** menu, select **Settings > Phone and Network Setup**.
- Make sure your broadband serivce is working. If other devices such as a computer in your home also connect to your broadband service, check to make sure you have service from those devices. If not, contact your broadband service provider for more information.

If using a dial-up connection:

- Make sure your phone line is connected to the back of the Recorder and to a phone jack.
- Make sure your phone service is working. Try to make a phone call using the same phone line.
- Make sure there are no messages waiting signals on your phone line.
- Make sure your dial-up settings are correct. On the **Start** menu, select **Settings > Phone and Network Setup**.

If you switched your connection from dial-up or wireless to wired (Ethernet) and cannot connect to the service:

1. Check for the Recorder IP address. On the **Start** menu, select **Settings > Settings > System Information**. Write down the IP address.
2. Go to a computer connected to your network. Open a command window (on the Start menu in Windows® XP, select Run and then type **cmd** and select OK), type **ping** followed by the IP address for the Recorder and press ENTER. If the request fails, then there is a network error. See your network documentation for more information.

- Your subscription may have expired. Visit www.microsoftprogramguide.com to determine the status of your subscription. To continue to receive Guide listings and schedule recordings of your favorite shows, the Recorder must be connected the Microsoft Program Guide service. Try connecting again. To connect again, download the Guide listings. On the Start menu, select **Settings > Guide Settings > Get Latest Guide Listings** and then select **Download Now**.

Issue	Solution
The TV picture is lost when the **Composite/480i/480p** switch is changed.	Make sure the Recorder is in Standby mode or the Recorder is turned off if you change the **Composite/480i/480p** switch. • Standby mode: Press Power on the front of the Recorder, or press POWER on the remote. The power light will turn off and the front panel displays the current time only. • Turn off the Recorder: Press and hold Power on the Recorder or POWER on the remote until the front panel of the Recorder is turned off. Turn the Recorder on: Press Power on the Recorder or POWER on the remote to bring the Recorder out of Standby or to turn the power on.
Cannot record a TV series.	To record a TV series, you must subscribe to the Microsoft Program Guide service. For more information, see **The Microsoft® Program Guide** in Appendix A.
Delete all of personal settings such as ZIP code and phone number.	To reset your own settings (such as ZIP code or phone number), press and hold ▶ (Play) and ■ (Stop) at the same time on the front of the Recorder until the Recorder restarts.
The Recorder has locked up or frozen–the Start menu does not display, the TV picture is frozen, the DVD tray will not open.	Restart the Recorder. **1.** Press and hold the Power button on the Recorder five seconds or press POWER on the remote for five seconds. The Recorder will shut down and the front panel display will turn off. **2.** Wait five seconds, and then press Power on the Recorder or press POWER on the remote.
Forgot the Parental Control PIN.	If you forget your PIN, you can enter the following Change PIN Authorization Number, and then create a new PIN. In the **Forgot PIN** message, enter the following authorization code, and then select **Done**: **Authorization Number: 2229566** You can then create a new PIN.
Unable to change the volume on the TV or mute the volume.	To change the volume on the TV or mute the volume, you must program the remote control to work with your TV. For more information, see **Program the Remote to Control the TV**.

Issue	Solution

There is no audio.	• Make sure the remote is programmed to change the volume on the TV or mute the TV. For mor information, see **Program the Remote to Control the TV**.
	• Check the audio connections between the cable set-top box or the satellite set-top box and the Recorder. For more information, see **Connect the Recorder to the TV, Audio Components, and Internet**.
	• Check the audio connections between the Recorder and the TV or home entertainment system. For more information, see **Connect the Recorder to the TV, Audio Components, and Internet**.
	• If you have enabled Dolby© Digital playback—5.1 audio—in **Settings > DVD Settings > Digital Audio Settings**:
	  • The DVD or other content you are watching supports 5.1 audio.
	  • Your home entertainment center amplifier/receiver supports 5.1 audio playback.
	  • You have selected **Bitstream** under **Dolby Digital**.
	• Check the Audio Settings. If Secondary Audio Program (SAP) is selected, try switching to Stereo. To check the audio settings, select **Start > Settings > Audio Settings**.

The TV picture is blurry, snowy, or black and white.	Check the video connections between your TV source (cable or satellite) and the Recorder. Also check the connections from the Recorder to the TV.
Pay-per-view or video-on-demand programming cannot be purchased.	To purchase pay-per-view or video-on-demand shows, use the remote control for your digital cable or satellite set-top box.
The Recorder does not respond to the remote control. (The remote cannot turn off the Recorder, the remote cannot change channels, the Start button does not display the Start menu.)	• Check the batteries are correctly positioned in the remote, or replace the batteries. • The Recorder may be in Demonstration mode. To end Demonstration mode, unplug the power cord from the back of the Recorder, wait five seconds, and then re-attach the power cord to the Recorder while press OPEN/CLOSE on the front panel.

Issue	Solution
Cannot change channels or the cable set-top box or satellite set-top box changes to the wrong channel.	The IR control cable may not be properly positioned or the IR settings for the remote may be incorrect. Make sure: • The cable set-top box or satellite set-top box is turned on. The set-top box must be left on at all times. If not, the Recorder cannot change channels and cannot record TV shows you schedule. • The IR control cable is properly positioned in front of the IR receiver on the digital cable or satellite set-top box. If you are not sure, check the documentation for you digital cable or satellite service. For more information, see **The IR control cable and the Serial Data Control Cable**. • The IR control cable is connected to the IR port on the back of the Recorder. • The IR settings for the cable set-top box or satellite set-top box are correct. These settings include the remote control code for the cable set-top box or the satellite set-top box and the speed of the remote control signal. If the remote control code is incorrect, incorrect codes may be sent to change the channels. If the speed for sending codes to the set-top box is incorrect, the set-top box may try to change channels incorrectly. Or, the Recorder may need to send an ENTER or OK code to set-top box after you enter a channel change. To change these settings, run Setup again. On the Start menu, select **Settings > Guide Settings > Setup TV Signal and Guide**. For additional information about the cable set-top box or satellite set-top box, contact the manufacturer or the TV service provider. • Some cable set-top boxes and satellite set-top boxes require you to press the OK or ENTER button on the remote control when you enter a channel you want to change to. Make sure you have correctly selected this option when you setup the Recorder. For more information, see section **5**. **Wiring Setup and TV Service Provider** in **Setup the Recorder**.

Issue	Solution
Channels do not change with the serial data control cable connected.	Restart both the satellite set-top box and the Recorder. If this channels still do not change, use the IR control cable instead. ***Notes:*** • Some satellite set-top boxes support the use of the serial data control cable to change channels and the IR control cable. However, not all of theses specific satellite set-top boxes enable the serial input port. For more information, check with the set-top box manufacturer. • Before you connect the serial data control cable, make sure the power cord for the Recorder and the power cord for the satellite setBefore you connect the serial data control cable, make sure the power cord for the Recorder and the power cord for the satellite set-top box are not plugged into a power outlet or power strip. • The Recorder supports serial data control by using the Serial-APG and Serial-MPG serial data control protocols. Check with the set-top box manufacturer or satellite service provider to make sure your satellite set-top box uses this standard. For more information, see The **IR control cable and the Serial Data Control Cable**.
The message "<TV show> cannot be recorded because there are too many recorded shows" appears.	The Recorder disk drive contains too many recorded TV shows and there is not enough disk space to record the current show. Go to Recorded TV and delete some recorded shows, or add a USB device for additional storage. For information about adding a USB device, see **Add Additional Storage**.
Pictures and Music from other computers are not available.	To display pictures and play music stored on a computer, the computer and the Recorder must be connected to the same network and the computer must be running Window Media Connect. If these two conditions are met, check the following: • Make sure both the computer and the Recorder have network access. For example, try downloading the Guide listings on the Recorder and open a browser window on the computer. • The computer must be turned on. • Open Windows® Media Connect and make sure the Recorder is listed as a recognized device. For more information, see **Windows® Media Connect: Access Pictures and Music Stored on a Computer**.
Cannot record a DVD from a DVD player to the Recorder.	You cannot connect a DVD player and then copy a DVD to the Recorder. For more information, see **Copying of Commercial/Retail Copyrighted DVDs**.
The Recorder plays a sample video repeatedly.	The Recorder may be in Demonstration mode. To end Demonstration mode, unplug the power cord from the back of the Recorder, wait five seconds, and then re-attach the power cord to the Recorder while press OPEN/CLOSE on the front panel.

Specifications

General

Television System	NTSC, Analog American Standard (480i)
Channel Coverage	Unscrambled Air/Analog CATV 1-135
Power Requirement	AC 120V, 60Hz
Power Consumption	65W
Hard Disk Drive	160GB
Operating Temperature	41°F to 95°F
Operating Humidity	5 % to 90 %
Dimension (W x D x H)	16.9 x 11.8 x 2.3 inches
Weight	11 lbs

Inputs/Output

RF Input	Air/Cable TV (1)
RF Output	Out To TV (1) (Loop Out)
Component Video Output	Component Out (1), RCA Jack connector 480p, 480i -> YPbPr
S-Video Output	Simultaneous Out with CVBS S-Video Out (1), 4-pin Mini-DIN
Composite Video Output	Video Out, RCA Jack connector (1-Port) Simultaneous Out with S-video
Video Output Selection Switch	480i -> Composite 480i, 480p -> Component Selection
Video In	480i Composite NTSC Video In with L/R in(2), RCA Jack connector
S-Video In	S-Video In, 4-pin Mini-DIN
Audio out	L/R Out(2), SPDIF Out (1: Optical, 1: Coaxial)
USB	USB2.0 (2-Port)
Ethernet	10BASE-T/100BASE-T, RJ45 (1)
Modem	56kbps Data Modem, RJ11 (1)
Satellite/Cable Set-Top Box Control	IR Controller (1), Serial Controller (1)

DVD ± R/W Specifications

DVD	DVD-ROM: 4.7GB (Single Layer) , 8.5GB (Dual Layer) DVD-R: 4.7GB (Ver. 2.0 for Authoring : read & write) 4.7GB (Ver. 2.0 for General : read & write) DVD-RW: 4.7GB (Ver. 1.1 read & write) DVD+R: 4.7GB (Ver. 1.1 read & write) DVD+R Dual Layer: 8.5GB (Ver. 1.0 read & write) DVD+RW: 4.7GB (Ver. 2.1 read & write)
CD	CD-ROM Mode-1 data disc CD-ROM Mode-2 data disc CD-ROM XA, CD-I, CD-Audio Disc Mixed mode CD-ROM disc (data and audio) CD-Extra, CD-Text CD-R (Conforming to "Orange Book Part 2": read) CD-RW (Conforming to "Orange Book Part 3": read)

LG Electronics, Inc.
LRM-519 Limited Warranty - USA

This LG Electronics product, will be repaired or replaced, at LG's option, if it proves to be defective in material or workmanship, under normal use, during the warranty period ("Warranty Period") listed below, effective from the date ("Date of Purchase") of original consumer purchase of the product. This warranty is good only to the original purchaser of the product and effective only when used in the United States, excluding U.S. Territories.

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LABOR: 90 days from the Date of Purchase. **PARTS: One Year** from the Date of Purchase. Replacement Units and Repair Parts may be new or factory remanufactured. Replacement units are warranted for the remaining portion of the original warranty period.	**Call 1-800-984-6306** for instructions on getting the defective unit repaired or replaced. **Please retain dated sales receipt and your box** to return the unit to LG for repair or replacement. Shipping both ways will be paid by LG during the first 90 days of the Warranty Period. During the remainder of the Warranty Period (91-365 days), you pay inbound shipping charges and LG pays return shipping charges. **Visit our website at: http://www.lgservice.com**

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The cost of repair or replacement under these excluded circumstances shall be borne by the consumer.

CUSTOMER INTER-ACTIVE CENTER NUMBERS:

For Warranty Service, Where to buy, Product Assistance, or Customer Assistance	**Call 1-800-984-6306** (24 hours a day, 365 days per year) and select appropriate options from the menu. Or visit our website at **http://www.lgservice.com**

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Issue 0
Printed in Korea